

Word-to-PDF and PDF Accessibility Guide

> "*The University of California is committed to supporting an information technology (IT) environment that is accessible to all and in particular to individuals with disabilities. To this end, the University seeks to deploy information technology that has been designed, developed, or procured to be accessible to people with disabilities, including those who use assistive technologies.*" — UC Information Technology Accessibility Policy

Since PDFs are part of that "information technology environment," those created and/or distributed by UC employees — such as those posted to UC websites or shared through other official channels like email, job boards and trainings — need to be accessible.

What does it mean for a PDF to be accessible?

In a general sense, this refers to a PDF having two qualities:

1. Programmed structure so that assistive technology users can read a PDF's contents and benefit from having access to:
    a. Additional context and meaning that is uniquely conveyed through certain structure types
    b. Additional navigation and reading options provided by certain structure types
2. A logical reading order so that assistive technology users encounter content in the sequence that best facilitates comprehension

This guide is intended to help you understand and achieve PDF accessibility.

Revised September 2020

We value your feedback:
Share questions and/or comments about this guide

Using this Guide

This guide centers around two checklists: Start in Word and PDF Remediation in Adobe Acrobat Pro. Each checklist poses a series of simple yes-or-no questions intended to guide you through evaluating a document's current level of accessibility and taking corrective action, if necessary.

Some checklist questions and feedback blurbs contain links, directing you toward Appendix sections that further explain particular accessibility concepts and/or provide detailed instructions for implementing accessibility improvements. Many Appendix sections contain similar links and sub-sections, so you can explore related concepts and techniques on your own and if desired, utilize the Appendix independent of either checklist.

You will also find footnotes scattered throughout this guide that provide examples and recommendations, address common misconceptions and overall, seek to further your understanding of this material.

Start in Word

If you're exporting a Microsoft Word document to PDF, it's best to do as much accessibility work as possible within Word. That way, when the document is exported to PDF, there will be fewer corrections to make in the PDF version and fewer corrections that will need to be re-applied if the source document is ever edited and then re-exported to PDF.

If you are building a source document from scratch or have the ability to make changes to the source document, begin with the Start in Word Checklist as early as possible[1].

PDF Remediation in Adobe Acrobat Pro

You won't always be able to work in the source document — sometimes you won't have access to it or the software used to create it — and even if you are able to work in and perfect the source document, there will still be a few final checks, and possibly some improvements, to make in the exported PDF.

If you cannot edit the PDF's source document, or if you have already done as much accessibility work as possible in the source document and hen exported it to PDF, use the PDF Remediation in Adobe Acrobat Pro Checklist.

[1] It's recommended that you review the Start in Word Checklist as early as possible so that you can make accessibility improvements and avoid potential accessibility problems as you develop the document, instead of having to come back after development is complete and fix issues that could've been avoided.

Start in Word Checklist

If you're exporting a document from Microsoft Word to PDF, it's always best to do as much accessibility work as possible within the source (Word) version. That way, when the document is exported to PDF, there will be fewer corrections to make in the PDF and fewer corrections that will need to be re-applied if the source document is ever edited and then re-exported to PDF.

Item #	Yes	No
1. Headings Have the headings in your document been tagged as headings and structured into a proper heading hierarchy?	Are you certain? Review Items #1a-#1d, if not.	Resolve Items #1a-#1d to ensure full compliance.
1a. Text That Looks Like Headings Does your document have text segments that have been giving unique styling (size, color, etc.) so that they look like *and* act as headings?	Continue to Item #1b.	No further accessibility checks or actions are needed in regards to Item #1.

Item #	Yes	No
1b. Tagged as Headings Have those headings been giving a Style or Outline level (thus tagging them as headings)?	Continue to Item #1c.	**FIX NEEDED:** Headings need to be tagged as headings using a Heading Style or Outline level so that assistive technologies can interpret them as headings. Review Items #1c and #1d to learn more about which specific Heading Styles and/or Outline levels you should use in your document; then, tag your document's headings. Continue to Item #1c.
1c. Document Title (If all five of the following questions can be answered "Yes," refer to that feedback; if any question is answered "No," refer to that feedback) 1. Does the document have a title? 2. Does that title reflect the entire document's contents? 3. Is that title located at the beginning, or near the beginning, of the document? 4. Is the title tagged as a Heading 1? 5. Is the title the only Heading 1 in the document?	Continue to Item #1d.	**FIX RECOMMENDED:** It's recommended that a document have an internal title that: reflects the entire document's contents; is at or near the beginning of the document; and is tagged as the only Heading 1 within the document[2]. Continue to Item #1d.

[2] Such titles provide important landmarks and contextual information, allowing users to expeditiously identify documents and understand what they contain.

Item #	Yes	No
1d. Proper Heading Hierarchy Is the heading hierarchy correct; does it accurately reflect the parent/child/peer relationships between headings *and* properly section the document?	No further accessibility checks or actions are needed in regards to Item #1.	**FIX NEEDED:** The heading hierarchy needs to accurately reflect the parent/child/peer relationships between headings *and* properly section the document. In accordance with the guidance offered here and in Items #1b and #1c, ensure that all headings within the document have been assigned a Heading # Style and/or Outline level as appropriate[3]. Once this has been done, no further accessibility work is needed in regards to Item #1.
2. Body Text[4] Is body text assigned the Normal Style or in some other way assigned the Body Text Outline level? (see also: Identify a Paragraph's Current Style)	No further accessibility checks or actions are needed in regards to Item #2.	**FIX NEEDED:** Body text needs to be assigned the Normal Style, or in some other way assigned the Body Text Outline level, so that it exports properly to PDF with Paragraph tags.

[3] I.e., factor in which heading levels are appropriate *and* also, if headings need to be recognized (as headings) by assistive technologies within Word; because, if the latter is the case, you will need to use the built-in Heading # Styles, as only those will reliably have their heading structure recognized by assistive technologies within Word.

[4] "Body text" refers to the main content of a document; it is regular, basic text.

Item #	Yes	No
3. Proper Paragraph Spacing (No Empty Paragraphs) Does your document avoid using empty lines of text (i.e., empty paragraphs) to create the desired amount of vertical space between paragraphs and instead use Paragraph Spacing (or Page Breaks or Keep with next)?	Are you sure; have you double-checked with Paragraph Marks shown? If so, no further accessibility checks or actions are needed in regards to Item #3.	**FIX NEEDED:** Empty lines of text can create problems for assistive technologies. Instead, use Paragraph Spacing to manipulate the amount of vertical space between paragraphs; use Page Breaks or Keep with next to push content to the next page.
4. Images and Graphics Does the document include any images or other graphics (e.g., shapes, graphs, charts, etc.)?	Continue to Item #4a.	No further accessibility checks or actions are needed in regards to Item #4.
4a. Image/Graphic Alt Text Have all non-decorative images/graphics been assigned succinct, descriptive alt text?	Continue to Item #4b.	**FIX NEEDED:** All non-decorative images/graphics must be assigned succinct, descriptive alt text so assistive technology users can understand them and the meaning they're intended to convey. Continue to Item #4b.

Item #	Yes	No
4b. Text Wrapping Do any of the images, or other graphics, use a text wrapping setting other than In Line with the Text?	Review the following sections and consider if any adjustments need to be made in light of this information: • Text wrapping's effect on accessibility within Word • Text wrapping's effect on accessibility when exported to PDF Once this has been done, and adjustments made if necessary, no further accessibility work is needed in regards to Item #4.	No further accessibility checks or actions are needed in regards to Item #4.
5. Link Text Is all link text unique and descriptive?	Continue to Item #5a.	**FIX NEEDED:** Link text needs to be unique and descriptive so that assistive technology users have the best possible sense of where, or to what, each link directs. Continue to Item #5a.
5a. Link Text Best Practices Have the following link text best practices been employed, if applicable? • URLs avoided • File format included • Aligned with destination H1/Title or anchor	No further accessibility checks or actions are needed in regards to Item #5.	**FIX RECOMMENDED:** Follow the link text best practices to ensure assistive technology users have the best possible sense of where each link directs. Once this has been done, no further accessibility work is needed in regards to Item #5.

Item #	Yes	No
6. Lists Have all lists been created using the Bullets or Numbering (List) features?	No further accessibility checks or actions are needed in regards to Item #6.	**FIX NEEDED:** Lists must be created using these list features so that they are properly tagged as lists when exported to PDF.
7. Tables Does the document include tables?	Multiple accessibility checks will be necessary. Continue to Item #7a.	No further accessibility checks or actions are needed in regards to Item #7.
7a. Tabular Data Are the tables used to present tabular data (see "Yes") or for layout purposes (see "No")?	Further accessibility checks will be needed. Continue to Item #7b.	**FIX NEEDED:** Tables should only be used to present tabular data and should not be used for layout purposes. Any content that has been put into a table solely for layout purposes needs to be removed from the table and presented in a different way. Continue to Item #7b.
7b. Title in Table Is the table's first row being used to host the table's title? Example of a table's first row being used to host the table's title	**FIX RECOMMENDED** Hosting a table's title within the table itself inhibits your ability to make the table fully accessible within Word. Remove the title from the table — and offer it in a different way, if you want to keep it — then delete the row that previously contained it. Continue to Item #7c.	Continue to Item #7c.

Item #	Yes	No
7c. Header Cells Do the cells in the table's first row describe the contents of each cell in their column (i.e., are they table header cells)?	Further accessibility checks will be needed. Continue to Item #7d.	Consider if programmed header cells would be appropriate for the table[5]. If so, add them in a new first row, then continue to Item #7d. If not, continue to Item #7e.
7d. Header Cell Programming Have the header cells been programmed?	Continue to Item #7e.	**FIX NEEDED:** Program the header cells so that assistive technology users can better interpret the table. Continue to Item #7e.
7e. Merged Cells Do any of the tables feature spanned or merged cells[6] (i.e., cells that span multiple columns and/or rows and are created by merging multiple cells into one)?	**FIX RECOMMENDED:** Spanned/merged cells can be difficult for assistive technologies to correctly interpret (and may require further remediation in Acrobat Pro), so it's often safest to avoid merged cells. No further accessibility checks or actions are needed in Word in regards to Item #7; however… **EVENTUAL FIX NEEDED:** If spanned/merged cells must be used, then you will need to follow these steps for remediating spanned/merged cells after export to PDF.	No further accessibility checks or actions are needed in regards to Item #7.

[5] I.e., can you think of a labels that would define the contents of each column and help users understand them?

[6] Both "spanned cell" and "merged cell" refer to the same thing, so these terms are used interchangeably throughout this guide; you may also find the combination term "spanned/merged cell" used.

Item #	Yes	No
8. Color Does your document use any colors other than the default blue link text (e.g., any other text colors, any background colors, any images that include color, etc.)?	Resolve Items #8a-#8d.	No further accessibility checks or actions are needed in regards to Item #8.
8a. Color Contrast Does each color meet its color contrast requirement (i.e., is there sufficient contrast between foreground and background elements)?	Are you sure? Have you tested all colors using a color contrast analysis tool? If so, continue to Item #8b.	**FIX NEEDED:** At the very least, you must test all your non-default colors using a color contrast analysis tool. If any colors fail to meet the required contrast ratio, you must change the color to one that does meet the color contrast requirement. Continue to Item #8b.
8b. Color Conveying Information Are there any instances within the document of color being used as the sole means of conveying information?	**FIX NEEDED:** Color should not be used as the sole means of conveying information. Incorporate an additional means of conveying that information.	No further accessibility checks or actions are needed in regards to Item #8.
9. Metadata Does the document's metadata clearly and accurately convey the document's title and author?	No further accessibility checks or actions are needed in regards to Item #9.	**FIX NEEDED:** Program the document's metadata in Word.
10. Headers and Footers Does the document contain any Headers and/or Footers?	Continue to Item #10a.	No further accessibility checks or actions are needed in regards to Item #10.

Item #	Yes	No
10a. Decorative Header/Footer Content Does the Header and/or Footer content need to be read (see “Yes”) or is it purely decorative (see “No”)?	Continue to Item #10b.	By default, most Header/Footer content won’t be read by assistive technologies when exported to PDF, but purely decorative content doesn’t need to be read, so no further accessibility checks or actions are needed in regards to Item #10.
10b. Repeated Header/Footer Content Does the Header and/or Footer content need to be read on every page — i.e., is it unique on certain pages and/or of critical importance? — (see “Yes”) or does the Header and/or Footer content only need to be read once[7] (see “No”)?	**FIX RECOMMENDED:** Since, by default, most Header/Footer content won’t be read by assistive technologies when exported to PDF, you’ll need think of a more accessible way of presenting that content within your Word document (i.e., not using Headers or Footers) or you’ll need to manually tag that content in Adobe Acrobat Pro after the document has been exported to PDF.	**FIX RECOMMENDED:** Consider employing this strategy for header/footer accessibility, which entails pulling the first instance out of the Header/Footer so that it can be read by default, while leaving other instances in the Header/Footer so they aren’t read by default.

[7] For example, if you place your department’s logo in a document’s Header so that it display on every page, assistive technology users only need to encounter that logo once to understand the document contains your department’s branding; they wouldn’t want to encounter it on every page because that would get repetitive and may even cause confusing by interrupting a paragraph that spanned two pages.

Item #	Yes	No
11. File Name Does the document's file name clearly relate to the document's internal title and metadata title, and offer a sense of what the document contains[8]?	No further accessibility checks or actions are needed in regards to Item #11.	**FIX RECOMMENDED:** It's best that a file name clearly relate to internal and metadata titles, and offer a sense of what the file contains; this provides numerous benefits to all users[9].
12. Save As Adobe PDF Are you ready to export your document to PDF?	Export the document from Word to PDF in the way that best maintains the accessibility structure, settings and improvements established in Word.	Return to this question when you are ready to export to PDF.

[8] To think about this another way, would a user who encountered this file name "in isolation" — e.g., if they encountered the file in their Downloads folder weeks or months after having downloaded it; would such a person… — know what the file contained without having to open it, based solely on the file name?

For example, let's say a document's internal and metadata titles are "Skill Builders Program Schedule 2020-2021"; then file names like "Skill_Builders_Schedule_2020-21" or "SB_Program_Schedule_2020-21" would be far superior to a file name like, "PS_SB_20-21_rev3.4.20_BT," which may be understood by, and provide relevant information to, the document's editors but would not be clearly understood by an external audience.

[9] For example, users can: 1) more easily confirm that a file they've downloaded is indeed the file they intended to download; 2) understand what a file contains without having to open; 3) better recognize the file when it's stored in content management systems; etc.

PDF Remediation in Adobe Acrobat Pro Checklist

In some circumstances, you won't be able to make accessibility improvements within a PDF's source file and will instead need to do all accessibility remediation within the PDF itself using Adobe Acrobat Pro[10].

Or, even if you are able make accessibility improvements in a source file, there are still a few final touches you can apply in Adobe Acrobat Pro to maximize your PDF's accessibility.

Many of the items in this checklist — but not all of them — relate to rules found in the Adobe Acrobat Pro Accessibility Checker.

Save Often Warning:
Adobe Acrobat Pro is a powerful remediation tool, but it does have a weakness — some remediation changes once applied cannot be undone, meaning you won't be able to use the Undo feature or adjust what you've done in another way; your only option will be to close the PDF without saving it and then open it again, which means you're going to lose, and need to redo, any work you've done since you last saved the PDF. To account for this, save as often as you can and with long PDFs in particular, consider saving multiple versions throughout the course of remediation, in case you need to go back to a certain step

Item #	Yes	No
1. Save Often Warning Did you read the Save Often Warning above this table?	Good, then you understand that you should save often when remediating a PDF.	Read it now! Saving often is one of the most important things to do when remediating a PDF with Adobe Acrobat Pro.

[10] You could use other remediation software as well, and but this guide will only speak to Adobe Acrobat Pro and specific features and processes contained within it.

Item #	Yes	No
2. Accessibility Full Check Have you run the Accessibility Full Check?	We won't cover all of the Accessibility Checker's rules in this checklist, so if you get a Failed indicator not covered here, use the Checker's Explain feature to learn more about and correct the issue. Continue to Item #3.	**ACTION NEEDED:** Run the Accessibility Full Check within Adobe Acrobat Pro; read the associated guidance in the "Yes" column; then continue to Item #3.
Document		
3. Image-only PDF Was this rule marked as Failed?	This means that the PDF is in fact an image, as often occurs when a PDF is produced by scanning a physical document. Assistive technologies cannot interpret text within images, so in such cases, you will need to: Obtain an alternate version of the document[11] if you can… Or if you can't, use Adobe Acrobat Pro's Recognize Text tool; running Recognize Text will convert text within the image to a format assistive technologies can interpret[12].	No further accessibility checks or actions are needed in regards to Item #3.

[11] I.e., a version that was not produced by printing and scanning the document.

[12] However, this conversion process isn't always 100% accurate — i.e., it will sometimes misidentify letters/characters in lower-resolution images — so for this, and other reasons, it is ideal to obtain an alternate version of the document, if you can.

Item #	Yes	No
4. Tagged PDF Was this rule marked as Failed?	**FIX NEEDED:** This indicates the PDF's contents lack sufficient tags, which means they may not be interpreted properly by assistive technologies or read in the correct order. You will need to properly tag the PDF's contents by autotagging the entire PDF and[13]/or manually tagging specific content segments.	**REVIEW NEEDED:** A "Passed" indicator for this rule means that tags are present, but it doesn't necessarily mean those tags are sufficient or entirely correct. You should always manually review your tags to ensure all content has been tagged (or turned into an artifact if it doesn't need to be read by assistive technologies) and that all tags are correct in their structure, organization and order. And since changes to tag structure and organization may occur when remediating other aspects of the PDF, it's recommended you review the PDF's tags once more at the end of the remediation process.

[13] You should not unconditionally rely upon Autotagging. It is a useful tool, but it cannot correctly process everything (e.g., it might not recognize that a heading should be a heading or assign it the correct level in the PDF's heading hierarchy), so you should always review Autotagging's output and manually adjust incorrect tags.

Item #	Yes	No
5. Logical Reading Order This rule requires a manual check: Does the order of the tags in the Tags pane represent the optimal order in which the PDF's contents could be read?	**WAIT TO MANUALLY PASS; REVIEW AGAIN LATER IN REMEDIATION PROCESS:** Changes to tag order within the Tags pane may inadvertently occur when remediating other aspects of the PDF, so it's recommended that you: a) manually re-check the tag order once more at the end of the remediation process to ensure it still represents the most logical reading order; and b) wait until then to manually pass this rule.	**FIX NEEDED:** The order of the tags in the Tags pane must reflect the optimal order in which the PDF's contents would be read by assistive technologies (i.e., the most logical reading order). Adjust the tag/reading order if necessary. However, changes to the tag order within the Tags pane may inadvertently occur when remediating other aspects of the PDF, so it's recommended you wait until the end of the remediation process to manually review and pass this rule.
6. Primary Language Was this rule marked as Failed?	**FIX NEEDED:** Right-click on the rule and select Fix; ensure the selected language is correct; then click OK.	No further accessibility checks or actions are needed in regards to Item #6.

Item #	Yes	No
7. Title Was this rule marked as Failed?	**FIX NEEDED:** This rule relates to the document metadata. Open the PDF's Properties to verify (or correct, if necessary) the Title and Author (and Keywords, if present), and add a Subject. Once you know the Title, Author and Subject are correct, Fix this rule.	**REVIEW NEEDED:** This rule is typically marked Failed in an initial accessibility check, so if it is marked Passed without you having manually passed it, an investigation is warranted: It's recommended you open the PDF's Properties to verify (or correct, if necessary) the Title and Author (and Keywords, if present), and add a Subject.
8. Bookmarks Was this rule marked as Failed?	**FIX NEEDED:** Bookmarks help users navigate more easily through long PDFs. Add bookmarks to the PDF, then check this rule again.	No further accessibility checks or actions are needed in regards to Item #8.
9. Color Contrast This rule requires a manual check: Does each color meet its color contrast requirement (i.e., is there sufficient contrast between each foreground element and its background)?	Are you sure? Have you tested all colors using a color contrast analysis tool? If you have and all colors meet their contrast requirement, then no further accessibility checks or actions are needed in regards to Item #9.	**FIX NEEDED:** You must test all your colors using a color contrast analysis tool. If any colors fail to meet the required contrast ratio, you must change the color to one that does meet the color contrast requirement.

Item #	Yes	No
Page Content		
10. Tagged Annotations Was this rule marked as Failed?	**FIX NEEDED:** This often means that there are links within the PDF that are not accessible to assistive technologies. Investigate the flagged elements; if they are inaccessible links, take steps to ensure those links are tagged properly.	No further accessibility checks or actions are needed in regards to Item #10.
11. Tab Order Was this rule marked as Failed?	**FIX NEEDED:** Right-click the rule within the Accessibility Checker and select Fix.	No further accessibility checks or actions are needed in regards to Item #11.
Forms		
12. Forms Does the PDF include form fields?	Continue to Item #12a.	No further accessibility checks or actions are needed in regards to Item #12.
12a. Tagged Form Fields Was this rule marked as Failed?	**FIX NEEDED:** Form fields need to be tagged so they can be detected by assistive technologies. Tag the form fields then continue to Item #12b.	Continue to Item #12b.

Item #	Yes	No
12b. Field Descriptions Was this rule marked as Failed?	**FIX NEEDED:** Form fields require field descriptions, a.k.a. Tooltips, so that assistive technology users can understand their purpose. Continue to Item #12c for further guidance on what to do when fixing this.	Continue to Item #12c.
12c. Unique Field Description/Tooltip Is each field description/Tooltip unique?	**CHECK NEEDED** Are you sure? Have you examined each form field's Tooltips?	**FIX NEEDED** Each form field must have a unique field description/Tooltip so that assistive technology users can differentiate it from other form fields. Edit each form field's Tooltip so that it is unique.
12d. Form Field Tab Order Is the form field tab order set to Order Tabs by Structure?	No further accessibility checks or actions are needed in regards to Item #12.	**FIX NEEDED** The form field tab order should be set to Order Tabs by Structure.
Alternate Text		
13. Figures Alternate Text Was this rule marked as Failed?	**FIX NEEDED:** This means there are figures (e.g., images, etc.) in the PDF that do not have alt text. Purely decorative figures should be turned into artifacts. Non-decorative figures should be assigned alt text that is succinctly descriptive.	No further accessibility checks or actions are needed in regards to Item #13.

Item #	Yes	No
Tables		
14. Headers Was this rule marked as Failed?	Further accessibility checks will be needed. Continue to Item #14a.	No further accessibility checks or actions are needed in regards to Item #14.
14a. Headers Appropriate?[14] Are there cells in the table(s) (perhaps in the first row or first column) that function as header cells (i.e., do they label and contextualize all the other cells in the column or row)?	**FIX NEEDED:** Those cells will need to be programmed as header cells. Follow these instructions for programming header cells in Adobe Acrobat Pro.	**SKIP NEEDED:** If there are multiple tables in the PDF, correct any tables that need to be corrected (i.e., program their header cells), then run Check Again on this rule. Once you have ensured that the only table(s) causing this rule to be marked Failed do not have cells that function as (and thus, should be programmed as) header cells, apply Skip Rule to this rule.
15. Regularity Was this rule marked as Failed?	This means that a table does not have the same number of cells in each column and/or row; it often occurs if a table includes a spanned/merged cell. Further accessibility checks will be needed. Continue to Item #15a.	No further accessibility checks or actions are needed in regards to Item #15.

[14] In essence, this item is getting at the question: is Item #13. Headers being marked Failed because there really is a problem with one or more tables in the PDF, or is it being marked Failed because the Accessibility Checker isn't capable of recognizing that the rule isn't actually applicable to one or more tables in the PDF?

Item #	Yes	No
15a. Spanned/Merged Cells Does the table have any spanned or merged cells[15]?	**FIX NEEDED:** Follow these instructions for remediating spanned/merged cells.	Continue to Item #15b.
15b. Number of <TD> or <TH> Tags in Each Row Does the table have the appropriate number of <TD> or <TH> tags in each row?	Follow these instructions for programming a table to ensure it has the same number of cells in all rows and columns.	No further accessibility checks or actions are needed in regards to Item #15.
Lists		
16. List Items, and Lbl and LBody Are either of these rules marked as Failed?	**FIX NEEDED:** This means that a list does not have the appropriate tag structure. An <LI> tag could be outside an <L> tag, or <Lbl> or <LBody> tags could be used inappropriately. Review the flagged lists and ensure they have the correct list tag organization. You may need to edit the tag's organization through the Tags pane.	No further accessibility checks or actions are needed in regards to Item #16.

[15] I.e., multiple cells that have been combined or “merged” together so they appear as a single cell. The term “spanned” is also used to describe these cells since they “span” multiple rows and/or columns.

Item #	Yes	No
17. Manual List and List Item Tag Check One of the most common list errors is one that won't get caught by the accessibility checker. Manually review all the List <L> tags in the PDF. Do they contain all the List Item <LI> tags that they should (see "Yes") or are some of their <LI> tags nested in separate <L> tags[16]?	No further accessibility checks or actions are needed in regards to Item #17.	**FIX NEEDED:** You will need to manually edit the tag organization through the Tags pane so that each <LI> tag is nested within the appropriate <L> tag.
Headings		
18. Appropriate Nesting Was this rule marked as Failed?	**FIX NEEDED:** This means that the heading hierarchy contains mistakes, such as that heading levels are skipped or that headings are nested improperly. Review the PDF's heading tags and manually edit their heading levels as necessary to ensure a proper heading hierarchy (see Editing Tag Structure Type Through the Tags Pane or Editing Tag Structure Type Through the Reading Order Tool).	No further accessibility checks or actions are needed in regards to Item #18.

[16] In essence, you're checking if a single list has been broken apart into multiple lists; e.g., a single three-item list might be broken apart into three one-item lists.

Item #	Yes	No
Final Checks Unrelated to Accessibility Full Check Results		
19. Link Text Is all link text unique and descriptive?	No further accessibility checks or actions are needed in regards to Item #19.	**FIX RECOMMENDED** If possible[17], edit the link text so it is unique and descriptive. If you are able to edit the link text, edit the link box so it encompasses the link text in its entirety.
20. Reflow Order Does the Reflow order reflect the reading order that best facilitates comprehension and match the assistive technology reading order established through the order of tags in the Tags pane?	No further accessibility checks or actions are needed in regards to Item #20.	**FIX NEEDED:** Adjust the Reflow order so it reflects the reading order that best facilitates comprehension and matches the assistive technology reading order established through the order of tags in the Tags pane.
21. File Name Does the PDF's file name clearly relate to the PDF's internal title and metadata title, and offer a sense of what the PDF contains?	No further accessibility checks or actions are needed in regards to Item #21.	**FIX RECOMMENDED:** It's best that the file name clearly relate to internal and metadata titles, and offer a sense of what the file contains; this provides numerous benefits to all users[18].

[17] You won't always be able to edit PDF text; sometimes complications arise that make it too difficult to edit text while maintaining other aspects of the PDF.

[18] For example, users can: 1) more easily confirm that a file they've downloaded is indeed the file they intended to download; 2) understand what a file contains without having to open; 3) better recognize the file when it's stored in content management systems; etc.

Item #	Yes	No
22. Tags Re-check; revisiting PDF Remediation Checklist Item #4. Tagged PDF Changes to tag structure and organization within the Tags pane may occur when remediating other aspects of the PDF, so you should re-check the Tags pane to ensure all content has been tagged properly. Upon manual review, is the PDF still tagged properly?	No further accessibility checks or actions are needed in regards to Item #22	**FIX NEEDED:** Edit the PDF's tags as necessary.
23. Logical Reading Order Re-Check; revisiting PDF Remediation Checklist Item #5. Logical Reading Order Changes to the tag order within the Tags pane may occur when remediating other aspects of the PDF, so you should re-check the Tags pane to ensure the tag order reflects the optimal order in which the PDF's contents would be read by assistive technologies. Upon manual review, does the tag order reflect the optimal reading order for assistive technologies?	No further accessibility checks or actions are needed in regards to Item #23.	**FIX NEEDED:** Edit the tag order so it reflects the optimal reading order for assistive technologies.

Appendix

Accessibility Full Check within Adobe Acrobat Pro

Adobe Acrobat Pro's Accessibility Full Check (a.k.a. Accessibility Checker) evaluates a PDF's accessibility and provides a report detailing whether the PDF passes or fails certain accessibility rules/standards. Not all of those rules will be covered in this guide, so if you get a Failed indicator not covered here, use the Checker's Explain feature to learn more about and correct the issue.

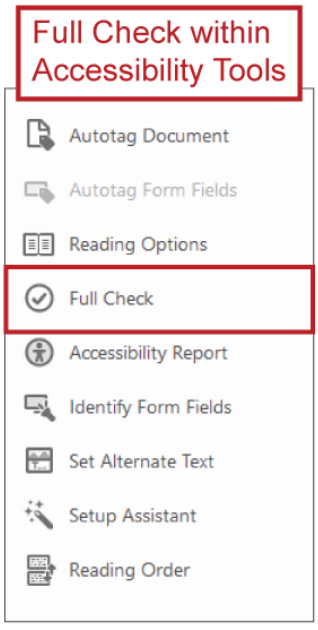
Return to:

- Item #2. Accessibility Full Check < PDF Remediation Checklist

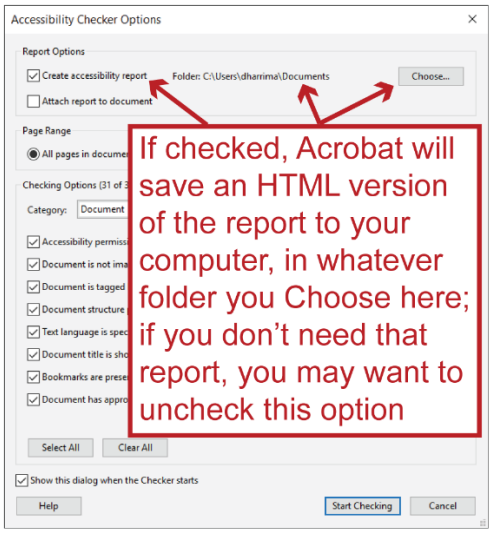
Running an Accessibility Full Check

To initiate a Full Check:

1. Open the Accessibility Tools and select Full Check.

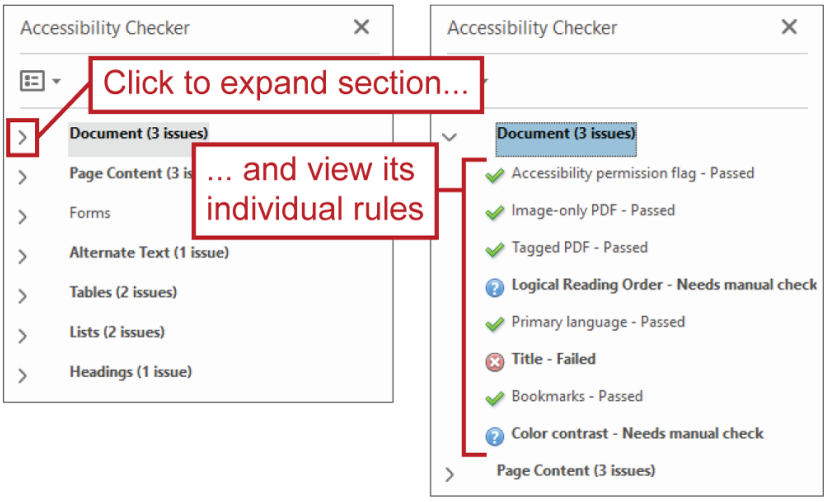


2. An Accessibility Checker Options panel will appear. For the most part, you can leave the default settings alone; the one option you may want to change is Create accessibility report
    a. If that option is checked, Acrobat will save an HTML version of the Checker's report to your computer, in a folder you can designate using the Choose button; if you don't need a permanent copy of the report, you may want to unselect (i.e., uncheck) this option so you don't end up with a slew of these reports saved to your computer



3. Click the Start Checking button to run the check

Once the check is complete, the results — organized by section — will appear in the Accessibility Checker Navigation pane. Click a section's > icon to expand the section and view the individual rules contained within it.

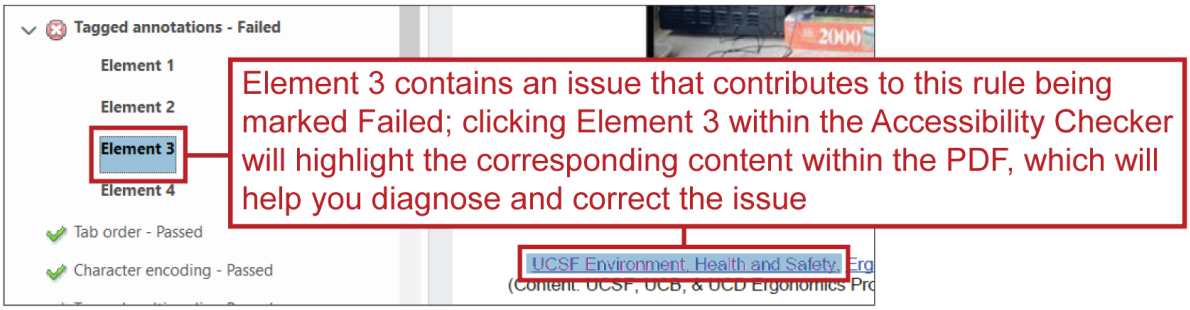


Return to:

- Item #2. Accessibility Full Check < PDF Remediation Checklist

"Flagged" Elements

Some Accessibility Checker rules, if marked Failed, will provide a list of the specific Element(s) that contain issues and caused the rule to be marked Failed. You may click on a listed Element to see the corresponding content highlighted within the PDF; this can help you diagnose and correct the element's issue(s).



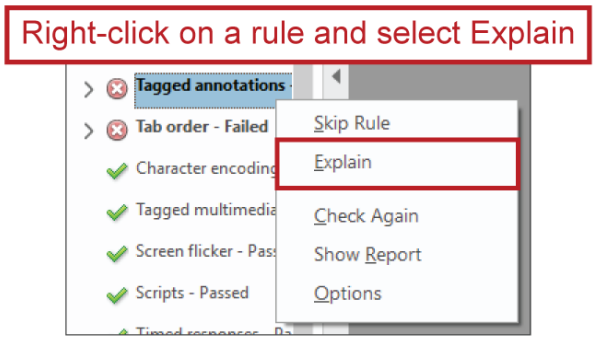
Return to:

- Item #10 Tagged Annotations < PDF Remediation Checklist

Explain

The Accessibility Checker's Explain feature can help you understand a rule and how to address it, if needed. To use the feature:

1. Right-click a rule within the Accessibility Checker pane
2. Select Explain
    - A web page explaining the rule and how to address it will open in your default internet browser



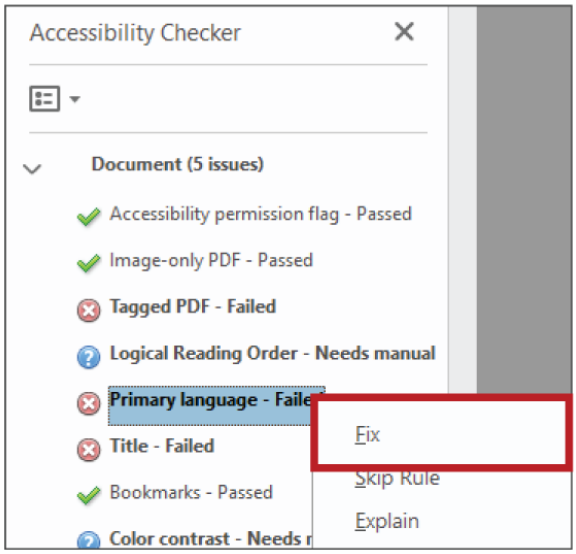
Return to:

- Item #2. Accessibility Full Check < PDF Remediation Checklist

Fix

Some Accessibility Checker rules offer a Fix option in their contextual menu[19]. This feature provides a simple means of fixing a rule marked Failed. To use the feature:

1. Right-click a rule within the Accessibility Checker pane
2. Select Fix



   a. If Fix is not available, that means it cannot be applied to the rule you've right-clicked
   b. For some rules, selecting Fix is all that is necessary and the rule will then be marked Passed
   c. Other rules may prompt you to complete an additional step after selecting Fix
3. If a prompt for an additional step appears[20], complete it and the rule will then be marked Passed

Return to:

- Item #6. Primary Language < PDF Remediation Checklist
- Item #7. Title < PDF Remediation Checklist
- Item #11. Tab Order < PDF Remediation Checklist

[19] "Contextual menu" refers to the menu that appears when you right-click something.

[20] For example, if you apply Fix to the Primary Language rule, a prompt will appear and require you to establish what the primary language is.

Skip Rule

Skip Rule bypasses an Accessibility Checker rule so it will no longer be marked Failed. Since our goal is to have all rules marked Passed, Skip Rule should, ideally, only be used in those uncommon instances when a rule cannot be marked Passed for technical reasons, such as with a "false fail[21]."

Return to:

- Item #14a. Headers Appropriate? < PDF Remediation Checklist

Check Again

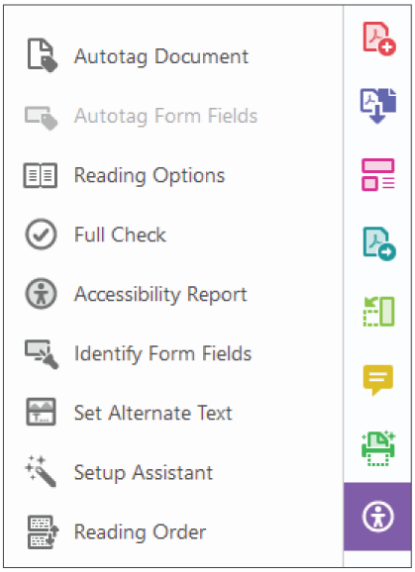
Check Again runs the Accessibility Checker again to determine if a rule's status has changed based on work you've done within the PDF.

Return to:

- Item #8. Bookmarks < PDF Remediation Checklist
- Item #14a. Headers Appropriate? < PDF Remediation Checklist

Accessibility Tools within Adobe Acrobat Pro

Many of Adobe Acrobat Pro's accessibility features can be accessed through the Accessibility tools: e.g., Full Check, Set Alternate Text and the Reading Order tool.

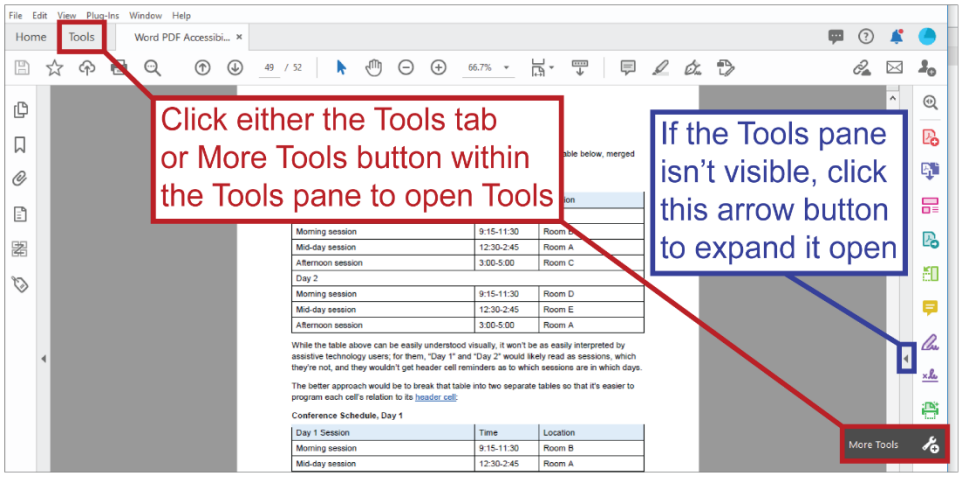


[21] I.e., when a rule is marked Failed because the Accessibility Checker incorrectly diagnosed an issue. For example, if a table does not have a legitimate header row (i.e., its first row does not contain cells that serve as, and should be programmed as, header cells), the Tables > Headers rule will be marked Failed when it's actually just not applicable and the Accessibility Checker is incapable of recognizing that (that particular rule tends to only be applicable when a table does have cells that should be programmed as header cells but are not).

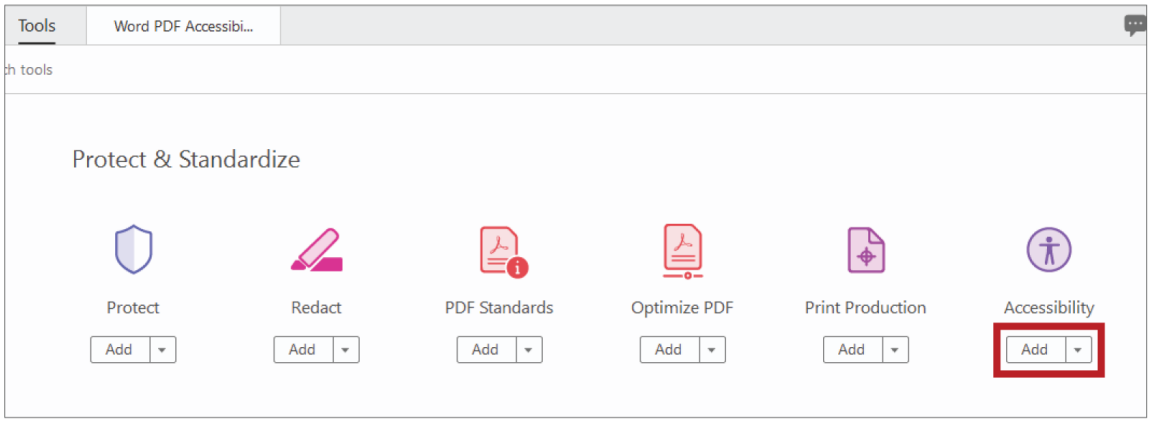
Accessing the Accessibility Tools within Adobe Acrobat Pro

The Accessibility tools can be accessed in a few different ways, and since you'll be using them frequently for accessibility remediation, you may want to create shortcuts to them.

1. Open Tools; you can do this by clicking the Tools tab (just beneath the menu options) or by clicking the More Tools button within the Tools pane



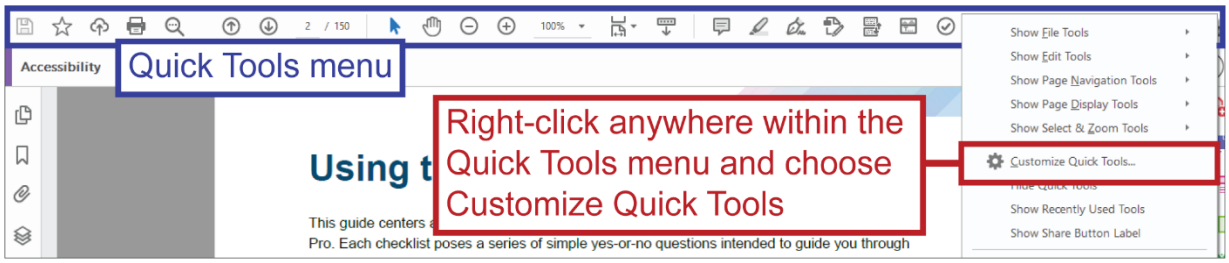
2. Find the Accessibility option within the Protect & Standardize section; click the Add button to add the Accessibility tools to the Tools pane



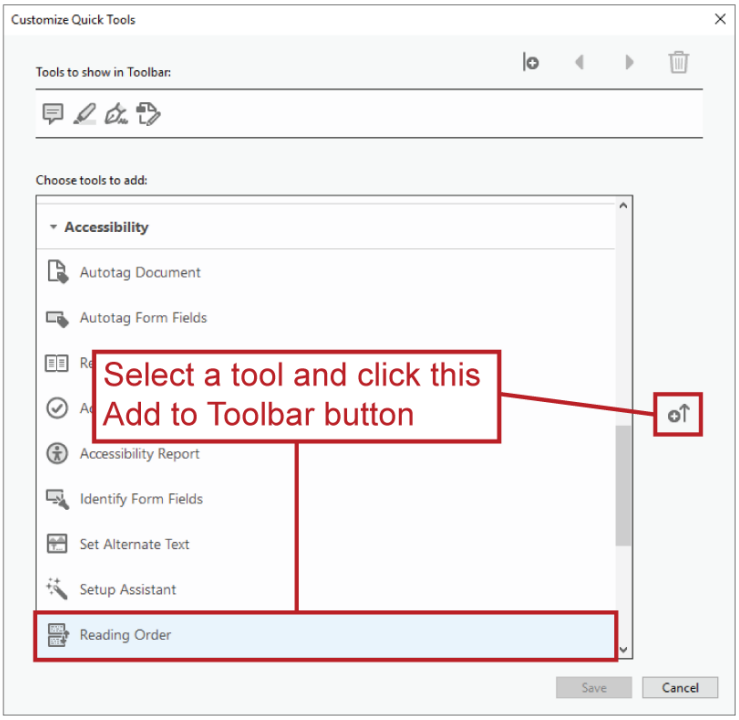
3. The Add button will then change to an Open button; click it to open the Accessibility tools within the Tools pane

You may also want to add some of the most frequently used Accessibility tools to your Quick Tools menu. To do this:

1. Right-click anywhere within the Quick Tools menu and choose Customize Quick Tools…



2. Scroll down to and expand the Accessibility section
3. Select Reading Order and click the Add to Toolbar button



4. Repeat Step #3 with the Set Alternate Text, Accessibility Full Check and Autotag Document tools
5. Click the Save button to save these changes

Adobe Acrobat Pro

Adobe Acrobat Pro DC is the subscription/paid version of Adobe Acrobat and is one of the applications most commonly used for remediating PDFs. It contains the accessibility-related tools used for remediation that are not available in the free version, Adobe Acrobat Reader DC.

Alt Text (a.k.a. Alternative Text)

Alt text is a text description applied to visual, non-text elements, such as images, shapes, graphs, charts, etc., so that assistive technology users can interpret what they are and what purpose they serve.

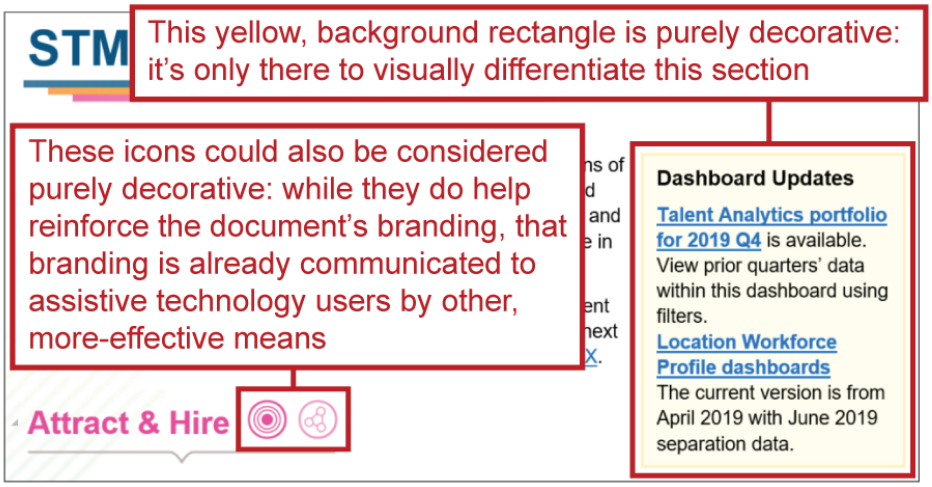
Alt text should succinctly describe the element and/or its purpose (see Assigning Alt Text in Word, and the screen shots and footnote contained within that section, for an example of alt text describing an element's purpose).

Return to:

- Item #4a. Image/Graphic Alt Text < Start in Word Checklist
- Item #13. Figures Alternate Text < PDF Remediation Checklist

Decorative Elements and Alt Text

An element is purely decorative if it only serves to enhance the visual design; it doesn't provide some other value or information that is not already being provided by something else — it's really just "eye candy."



Elements that are purely decorative should be hidden from assistive technologies and do not require alt text.

You cannot hide elements from assistive technologies within Word; that can only be done in a program like Adobe Acrobat Pro after a document has been exported to PDF (see: Artifact).

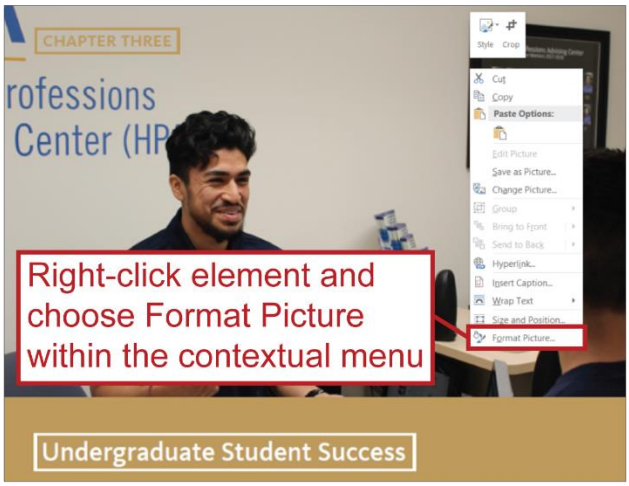
Return to:

- Item #4a. Image/Graphic Alt Text < Start in Word Checklist
- Item #13. Figures Alternate Text < PDF Remediation Checklist

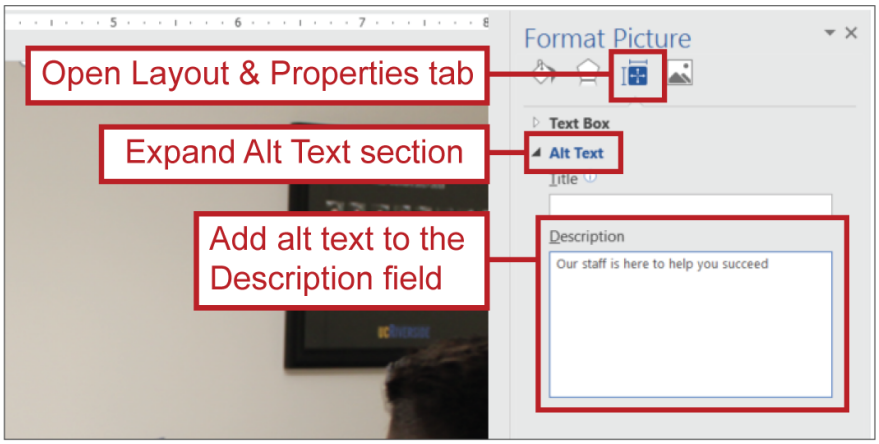
Assigning Alt Text in Word

In Word, alt text can be added and edited through an element's Format properties. To access an element's alt text:

1. Right-click on the element; then select the "Format…" option



2. Navigate to the Layout & Properties tab, expand the Alt Text section and input alt text into the Description field



[22]

Return to:

- Item #4a. Image/Graphic Alt Text < Start in Word Checklist

[22] Note the alt text assigned to the image in this example. It isn't something like, "staff member in UCR student center speaking with a student," which would accurately describe what we see in the image but doesn't really speak to why that particular image is there. Instead, the image has the alt text, "our staff is here to help you succeed," which speaks to the meaning and purpose of this particular image selection; it's there to send/reinforce the message that UC staff is available to help students succeed.

An argument could also be made for just treating this image as a decorative element and hiding it from assistive technologies.

Assigning Alt Text in Adobe Acrobat Pro

There are multiple ways to assign alt text in Adobe Acrobat Pro; explore them in the following sub-sections: Set Alternate Text and Object Properties.

Return to:

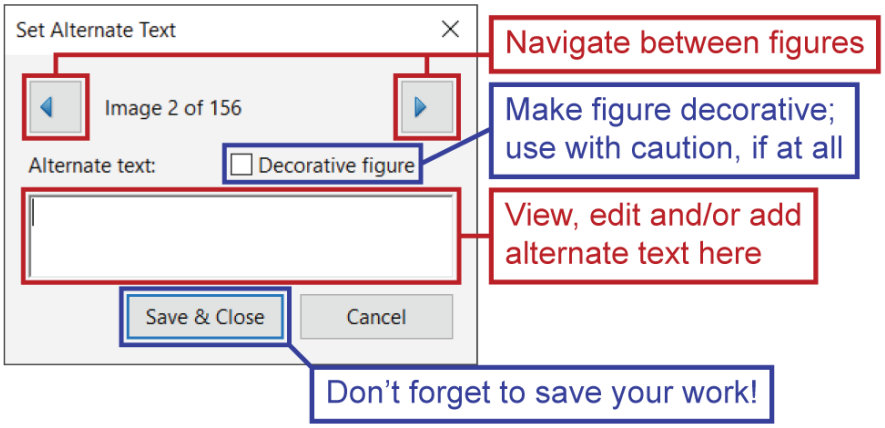
- Item #13. Figures Alternate Text < PDF Remediation Checklist

Set Alternate Text

Set Alternate Text is a feature within the Accessibility tools. It will detect all non-artifacted figures within the PDF, display their alt text and provide an opportunity to edit it. There is also a decorative figure option which should be used with caution, if at all.

Use the arrow buttons within the Set Alternate Text panel to move between non-artifacted figures.

Make sure to use the panel's Save & Close feature to save any changes made through it.



Return to:

- Item #4a. Image/Graphic alt text < Start in Word Checklist
- Item #12. Figures Alternate Text < PDF Remediation Checklist

Decorative Figure

Checking the Decorative figure box within the Set Alternate Text panel will change an element's tag type from figure to artifact; this can be seen within the Object Properties panel, where you'll see the Tag Type set to Artifact, and within the Tags pane, where you'll see the element's <Figure> tag changed to a <P> tag but with the standard tag icon instead of the paragraph icon typically associated with actual <P>, as in paragraph, tags.



The problem with this method is that it doesn't actually artifact the element, thus hiding it from assistive technologies; all it does is strip away the structure information ("figure") that assistive technologies would read. If that structure information is the only readable information associated with the element, then once it's removed, assistive technologies will have nothing to read for the element and may skip right over it, same as they would had the element been turned into an actual artifact. But if there is other readable information associated with the element, such as alternate text, it will still be read by assistive technologies.

Bottom line:

- Use this feature with caution, if at all
- It's better to use one of the methods that turns an object into an actual artifact; see:
  - Change Tag to Artifact ("Artifacting") Through the Tags Pane and/or…
  - Tag Content as Artifact Through Reading Order)
- Do not use this feature on elements that have alt text.

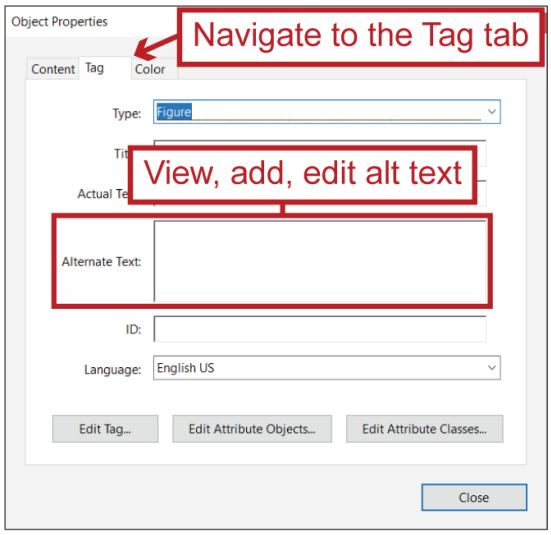
Object Properties

You can also assign, view and edit alt text through Object Properties. To do so:

1. Right-click on an element's tag within the Tags pane
2. Select Properties



3. Open the Tag tab within the Object Properties panel; in the Alternate Text field you can view, add and edit the element's alt text



Return to:

- Item #12. Figures Alternate Text < PDF Remediation Checklist

Artifact

In the context of PDFs, an artifact is a piece of content that has been deliberately hidden from assistive technologies, most often because it is purely decorative but sometimes, as well, because it is repeated within the PDF more than it needs to be read[23].

Hiding certain content from assistive technologies in this way (a.k.a. "artifacting") makes for a more efficient user experience and can help avoid confusion, frustration and even repetitive stress injuries.

Return to:

- Item #4. Tagged PDF < PDF Remediation Checklist
- Item #13. Figures Alternate Text < PDF Remediation Checklist

[23] For example, if the same copyright statement appears on a every page of a document, one could reasonable argue that it did not need to be read on every page, especially if that might interrupt, or cause confusion with, how other content is being read (e.g., imagine a paragraph that spans two consecutive pages and the potential confusion caused by hearing a copyright statement read at some random point within that paragraph). A better approach may be to have the copyright statement available to assistive technologies on the first and last pages, and turned into an artifact on all other pages.

Wordmarks, logos and other branding elements provide additional examples of types of content that may appear repeated in a PDF more than they reasonably need to be read.

Turning Content into an Artifact ("Artifacting")

The following techniques can be used to turn content into an artifact; they are ordered from most recommended (top of the list) to least recommended (bottom).

See:

- Change Tag to Artifact ("Artifacting") Through the Tags Pane
- Turning Content into an Artifact ("Artifacting") Through the Content Pane
- Tag Content as Artifact ("Artifacting") Through Reading Order
- Set Alternate Text > Decorative Figure — a method similar to artifacting that should be used with caution, if at all

Assistive Technologies

Assistive technologies assist users of different abilities in using electronic environments. Screen readers are one of the most commonly referenced forms of assistive technologies. They assist users who have visual impairments by reading aloud the content within an electronic environment (e.g., webpages or PDFs) depending on how that content is programmed. There are other assistive technologies one might use when engaging with a PDF — e.g., a braille converter, zoom controls (see: Reflow), etc. — but like screen readers, they rely on content being properly programmed; thankfully, this guide helps with that!

This screen reader demonstration video will help you get a sense of how screen readers read properly programmed content and use structure to provide more navigation and reading options.

See also:

- Structure
    - (Style) Further Assistive Technology Benefits Provided by Structure

Bookmarks

Bookmarks helps users navigate more easily through long PDFs by providing programmed destinations to which they can immediately jump.

Headings often act as bookmarks, but other structure types and destinations within a PDF can be assigned as bookmarks as well.

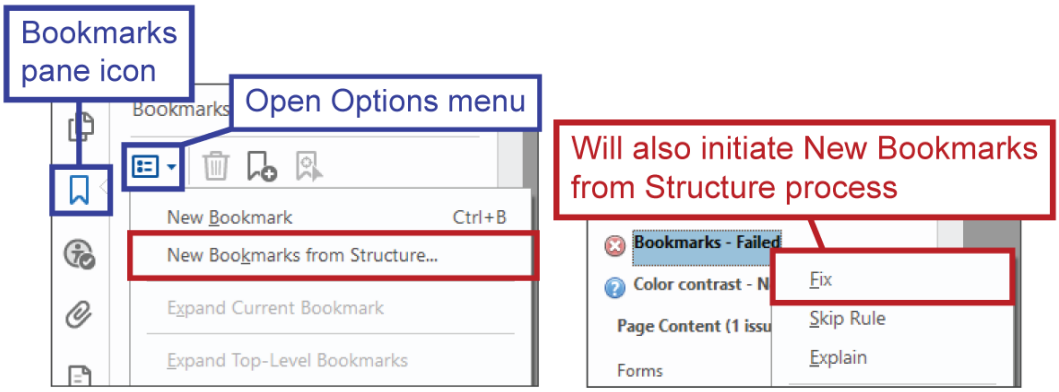
Return to:

- Item #8. Bookmarks < PDF Remediation Checklist

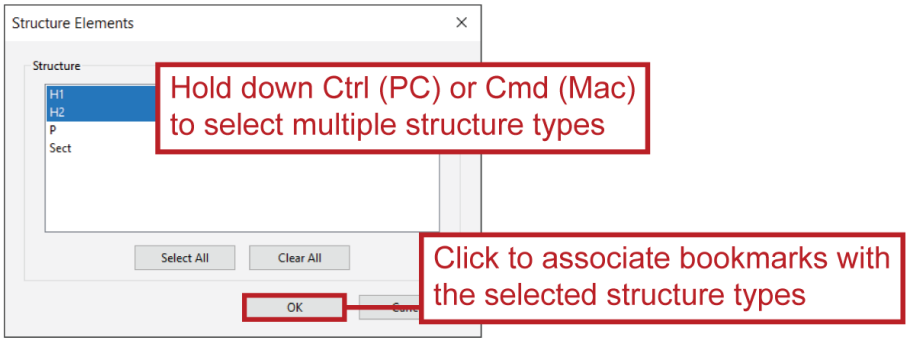
Adding Bookmarks

There are a number of ways to add and manage bookmarks within Adobe Acrobat Pro.

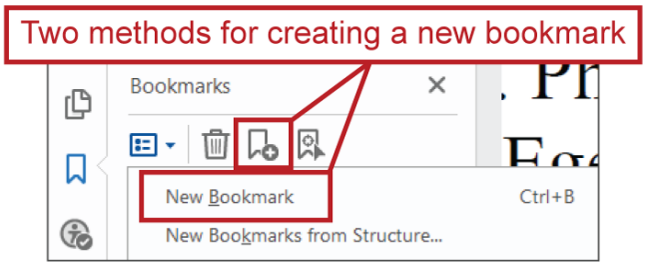
One of the most expeditious methods is to use the New Bookmarks from Structure feature, which can be accessed within the Bookmarks pane's Options menu or by right-clicking on the Accessibility Checker's Bookmarks rule and then selecting Fix.



In the Structure Elements panel you can select the structure types to which you'll assign bookmarks. If you are adding bookmarks to a PDF that lacks bookmarks, it's recommended that you select all the Heading types — hold down the Ctrl (PC) / Cmd (Mac) key to select multiple types — and click OK.

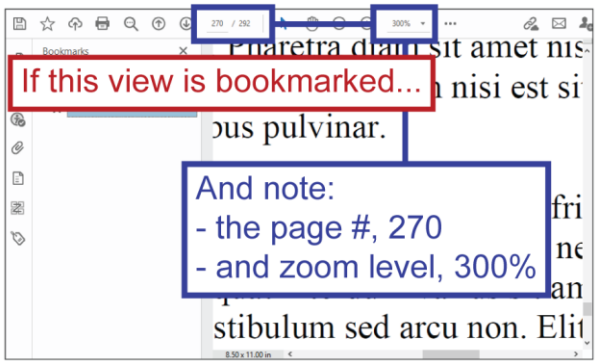


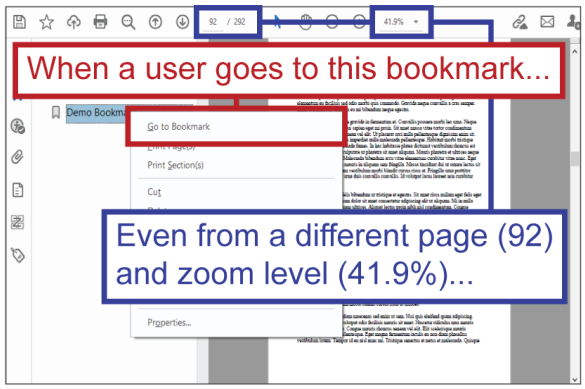
If there are no headings in PDF, you may need to manually assign certain destinations as bookmarks. To do so, use the New bookmark feature, which can be found within the Bookmarks pane and the pane's Options menu.

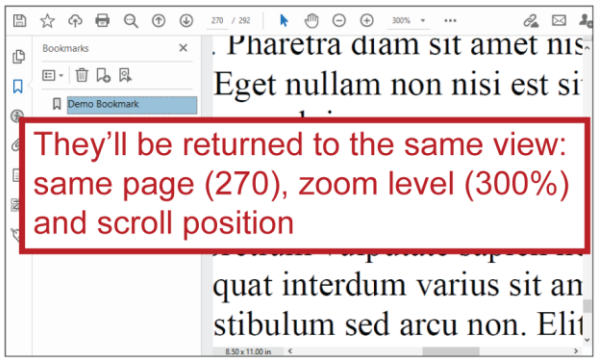


This feature “bookmarks” your current view[24] of the PDF so it can be returned to immediately and even captures your zoom level and scroll position. For example…

If the PDF view seen in the first screen shot below is bookmarked, then a user who clicks on that bookmark will be given the same exact view, regardless of what page they were on or how zoomed in/out of the PDF they were previously.







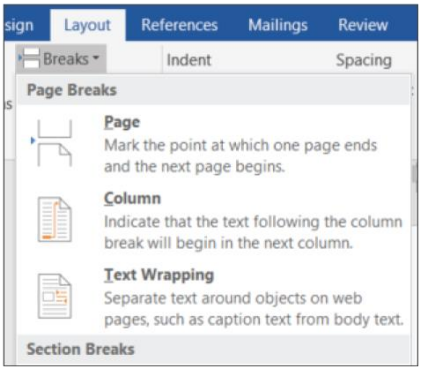
Return to:

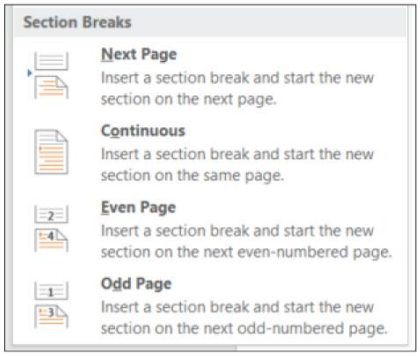
- Item #8. Bookmarks < PDF Remediation Checklist

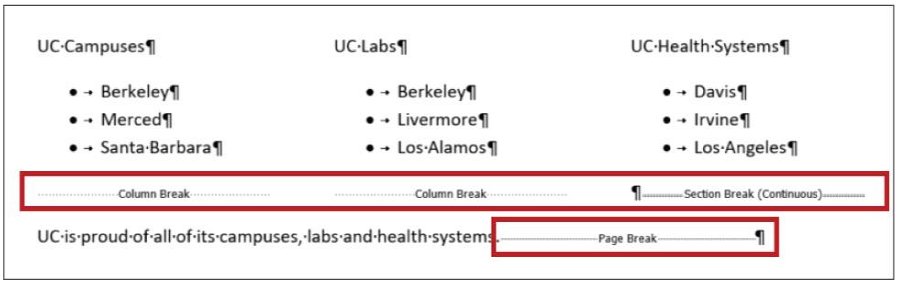
[24] I.e., literally, how the PDF appears on your screen within Adobe Acrobat Pro.

Breaks

Breaks are a Microsoft Word Layout feature (found in the Layout ribbon) used to control where specific sections and/or pages end. They provide the most accessible means of achieving certain design and layout objectives, such as organizing content into columns and controlling where pages and uniquely-formatted sections end.

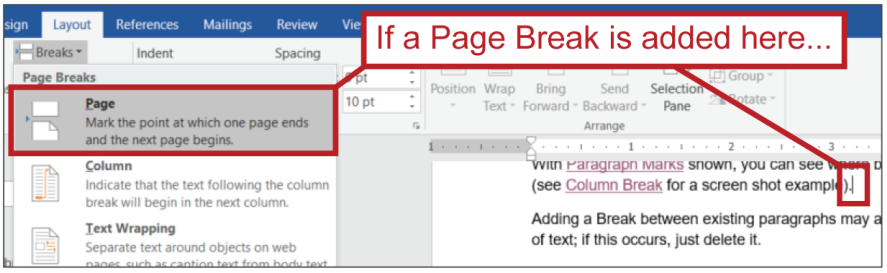






With Paragraph Marks shown, you can see where Breaks have been applied within a document.

Adding a Break between existing paragraphs may add an unintended and undesired, new line of text; if this occurs, just delete it.





Return to:

- Item #3. Proper Paragraph Spacing < Start in Word Checklist

Page Breaks vs. Section Breaks

Page Breaks allow you to control where a page ends; all content after a designated Page Break will be pushed to the next page.

Section Breaks influence how a document is separated into sections; each section within a document can have its own unique Layout properties, such as its own column organization, margins, orientation, page numbering, headers/footers, etc. [25]

Section Breaks provide a powerful layout tool, but they can also create unintended issues if used imprecisely[26], so it's recommended that you use Page Breaks unless you specifically need to uniquely format certain sections, as Section Breaks allow.

Page Break and Next Page Break

Both the Page Break and Next Page Break end the page on which the Break is applied and push content after the Break to the next page. The difference between these two Breaks is that the Next Page Break also creates a Section Break and thus, multiple sections that can be formatted independently.

Only use the Next Page break if you specifically need to create a Section Break; otherwise, use the Page Break.

When to Use and Not Use Page Breaks

Page Breaks aren't always the best tool available for pushing content to the next page. They're ideal if you want a break to occur between certain pages regardless of other factors. For example, if a document has an Index, you would likely want to apply a Page Break to the page before the Index because there are no circumstances in which you'd want any Index content appearing on that page.

But if you were thinking of using a Page Break to push a bit of content to the next page only so that it would be displayed on the same page as other content, the Keep with next Paragraph Setting might offer the better means of achieving that goal.

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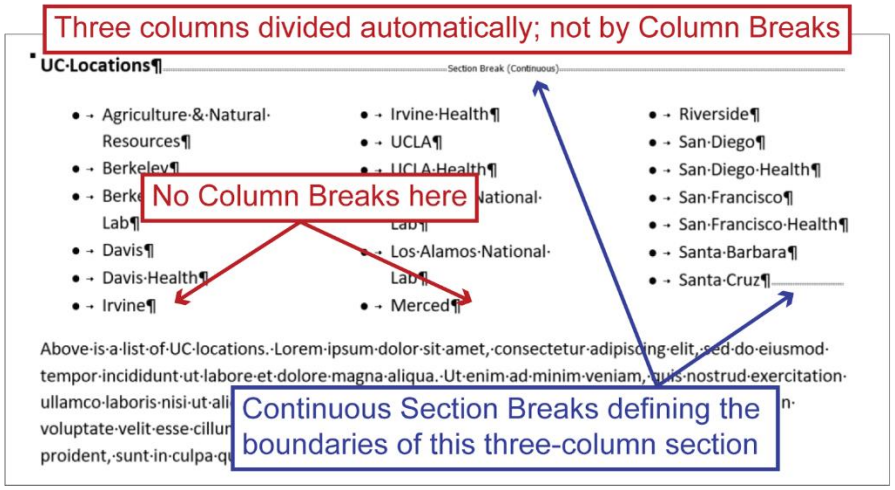
[25] The word "section" is used informally throughout this guide to describe chunks of content. In context of breaks though, "section" is a formal term, describing a region within a document as defined by Section Breaks; only this type of "section" can be given its own unique Layout properties.

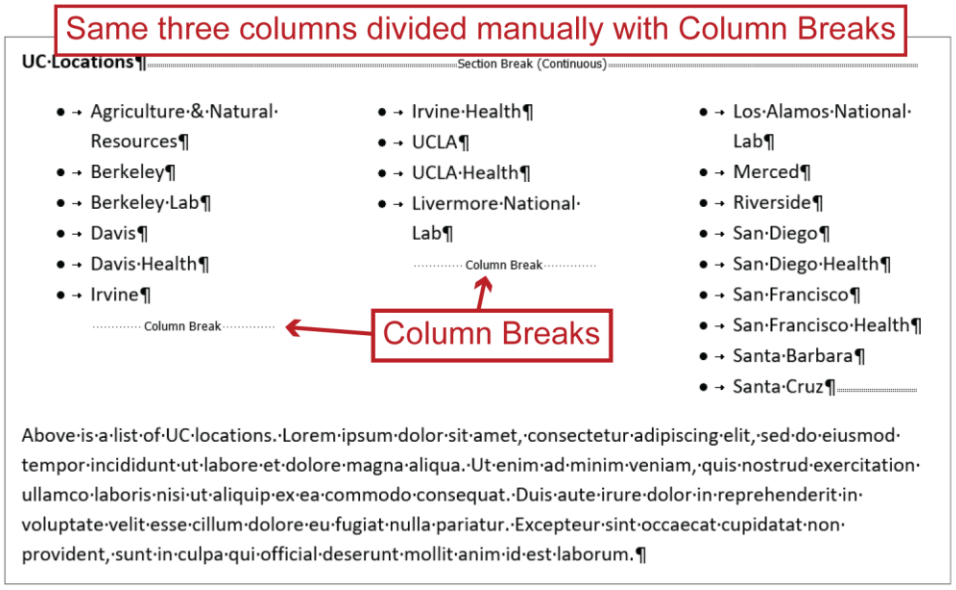
[26] For example, let's say you use a (Section) Next Page Break instead of a (Page Break) Page Break and later decide you need to adjust your document's margins. Because you divided your document into two sections with the (Section) Next Page Break, the margin change will only be applied to one of the two sections, so you'll either have a document that looks weird or you'll need to manually apply that margin change to the other section as well, to prevent the document from looking weird.

Column Break

Column Breaks allow you to manually control how content is divided into various columns. For example…

In the screen shots below you can see how a list would be divided into three columns by default, without Column Breaks, and how that division can be manually controlled with Column Breaks (you can also see, in the screen shots, how Continuous Section Breaks are used to set only a certain section in columns).





27

[27] Keep in mind, this example is intended to show how Column Breaks work and is not intended to show how content should be organized in columns (i.e., we acknowledge that the column organization seen in the first screen shot looks better than, and is likely preferable to, the column organization seen in the second screen shot).

Color

Color Contrast Requirements

There must be sufficient contrast between foreground elements that need to be read and their backgrounds — such as between foreground text and the background page color — so that sighted users can accurately discern those foreground elements. Contrast is measured by "contrast ratio." UC has adopted the WCAG 2.0 level AA standard, which dictates the following contrast ratio requirements:

- 3:1 contrast ratio for "large text"
- 4.5:1 contrast ratio for "normal text"
- 3:1 contrast ratio for graphics
    - However, for text within graphics, refer to the "large text" and "normal text" requirements
- 3:1 contrast ratio for user interface components (e.g., form fields, radio buttons, etc.)
    - For text within interface components, refer to the "large text" and "normal text" requirements

"Large text" is defined as:

- If text is bold, 14 points[28] in size or larger
- If text is not bold, 18 points in size or larger

"Normal text" is defined as:

- Any text smaller than "large text"

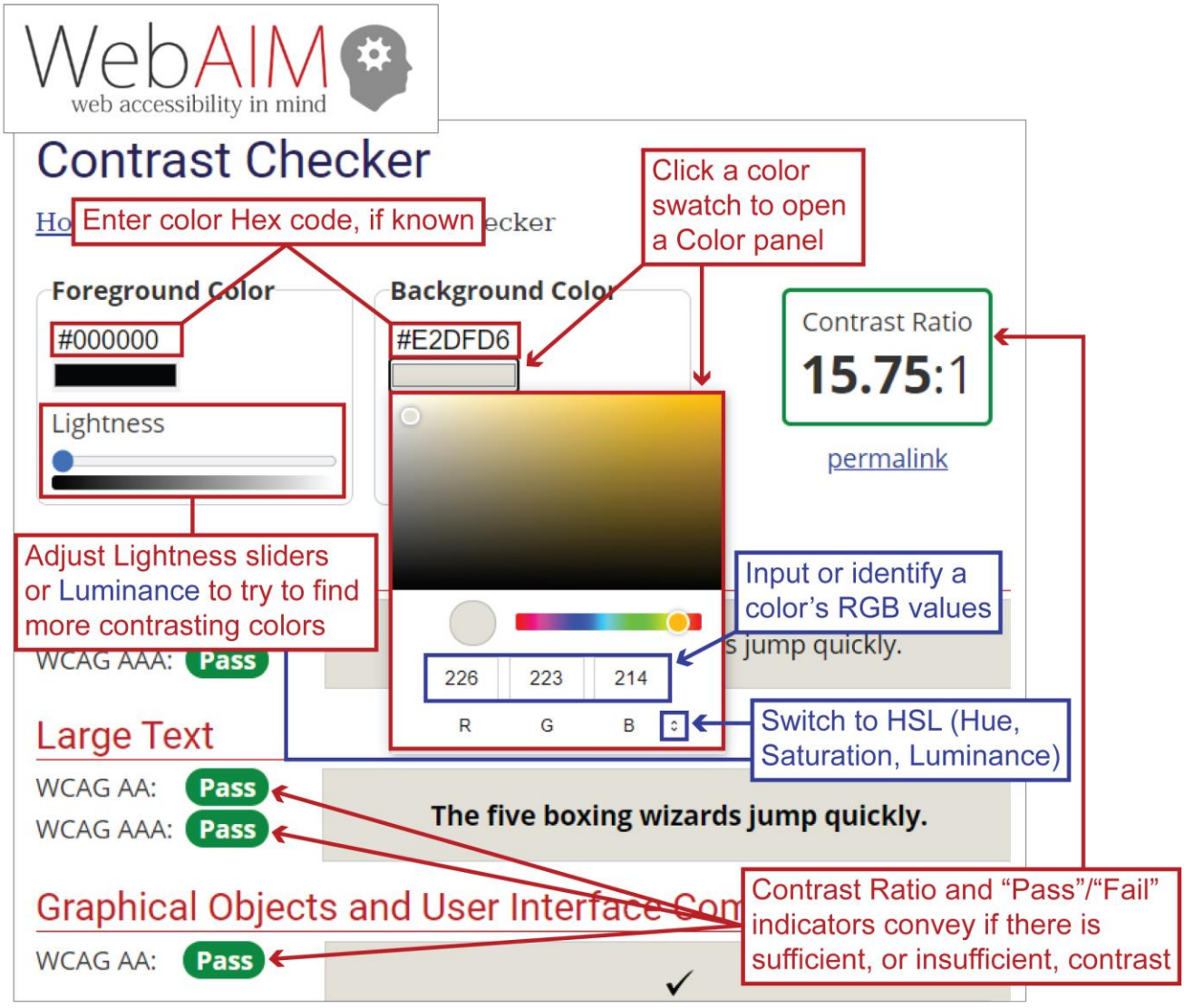
Return to:

- Item #8a. Color Contrast < Start in Word Checklist
- Item #9. Color Contrast < PDF Remediation Checklist

[28] In Word, font/text size is measured in points by default, so any number you see associated with font/text size is a points measurement.

Color Contrast Analysis Tools

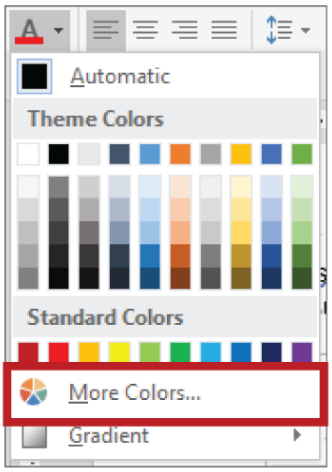
Many color contrast analysis tools are available to assist you in evaluating contrast ratio, including various websites, browser plug-ins and applications. WebAIM's Contrast Checker, shown in the example below, is one such, commonly-used tool.



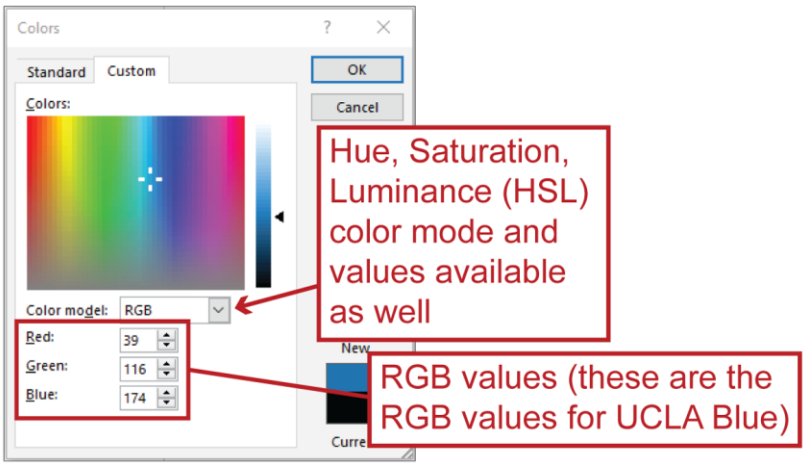
Some tools can even identify colors for you[29], as opposed to you having to manually input a color's RBG (or HSL) values or hex code, which is required with WebAIM's Contrast Checker.

If you are using a tool that requires you to manually input color information[30], you'll need to know how to find and input color information within Word. To do this (in most cases):

1. Select "More Colors" within a color menu to open the Colors panel



2. In the Colors panel, open the Custom tab; the Red, Green, Blue (RGB) values should be displayed by default, and you can change the Color Mode to HSL if you'd like to work with the Hue, Saturation and Luminance[31] values instead

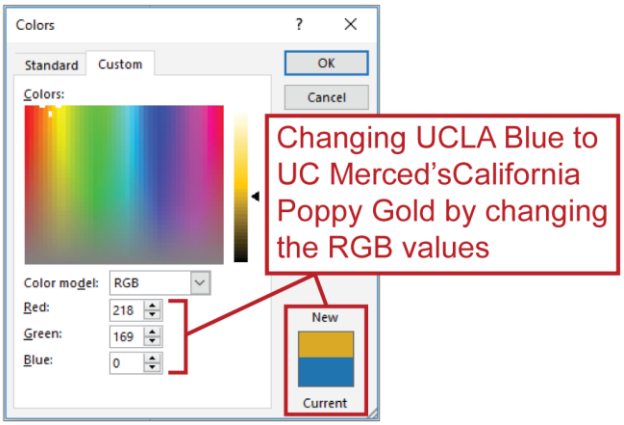


[29] Using what's commonly referred to as an "eyedropper tool".

[30] There are various combinations of color information that can be used to identify and/or assign colors. RGB (red, green, blue) values and HSL (hue, saturation, lightness/luminance) values are the two combinations available in Word. Hex codes and CMYK (cyan, magenta, yellow, black) values are other combinations, available in other platforms such as HTML/CSS and the Adobe Creative Suite.

[31] The "L" in "HSL" is sometimes referred to as "lightness" instead of "luminance."

3. To change a color using known RGB or HSL values, simply enter them into the applicable fields and click OK



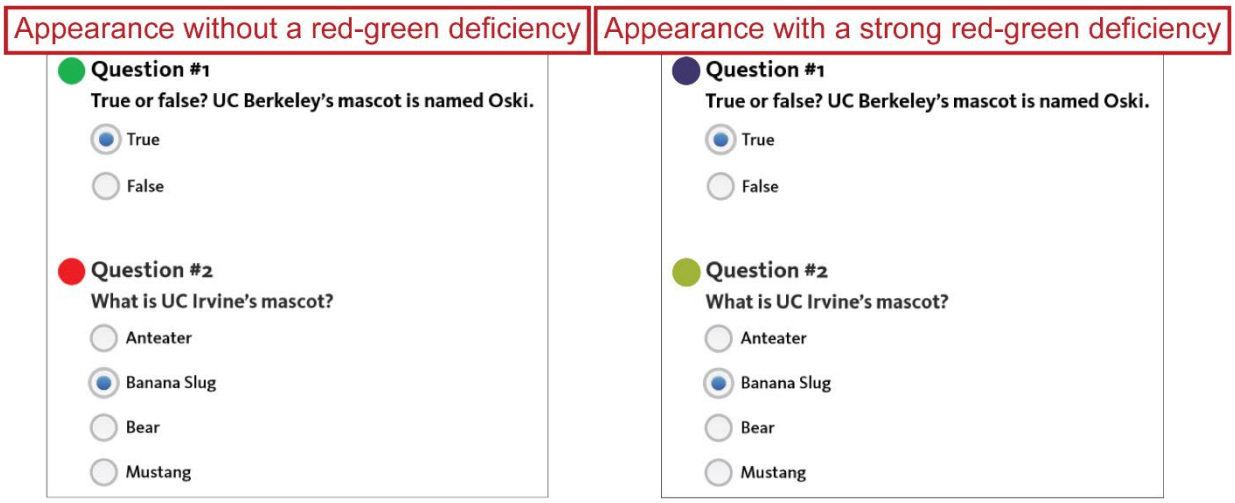
Return to:

- Item #8a. Color Contrast < Start in Word Checklist
- Item #9. Color Contrast < PDF Remediation Checklist

Color Being Used as the Sole Means of Conveying Information

It is important that color not be used as the sole means of conveying information because that information would then be inaccessible to individuals affected by color blindness or color vision deficiencies.

For instance, if red and green circles were used to identify right and wrong answers in a quiz, as seen in the examples below, an individual with a red-green deficiency (the most common form of color blindness) would be less able to know which answers were right and which were wrong.

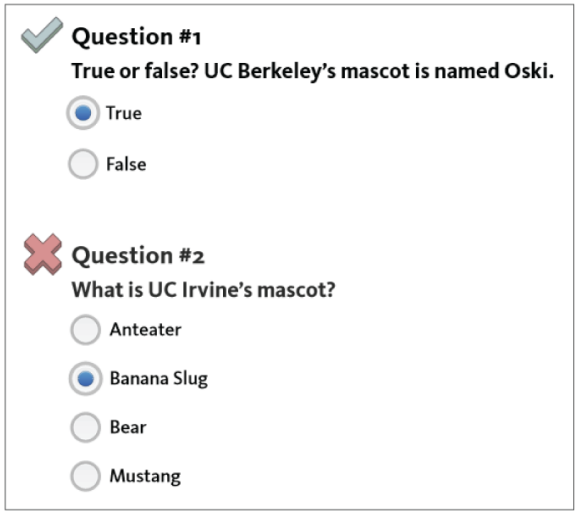


Return to:

- Item #8b. Color Conveying Information < Start in Word Checklist

Incorporate an Additional Means of Conveying that Information

Color can be used to convey information, but it should be used in combination with another means of conveying the same information. For example, traffic signals convey information not only through the color of their lights but through the position of those lights, as well; link text signals it is link text not only through having a unique color but also through having an underline. Similarly, the quiz questions from the previous section's example could be modified to convey the correct/incorrect information through shapes as well as through color.

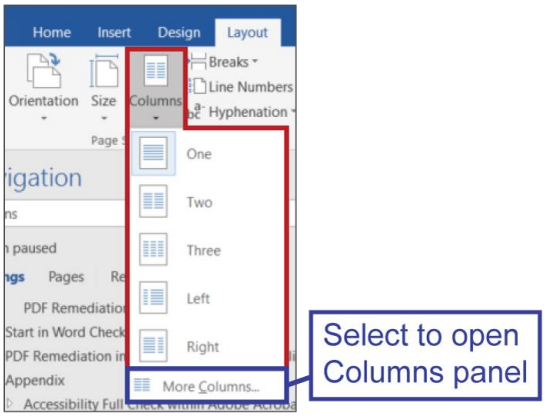


Return to:

- Item #8b. Color Conveying Information < Start in Word Checklist

Columns

Columns are a Microsoft Word Layout feature used to organize content into columns across a page.



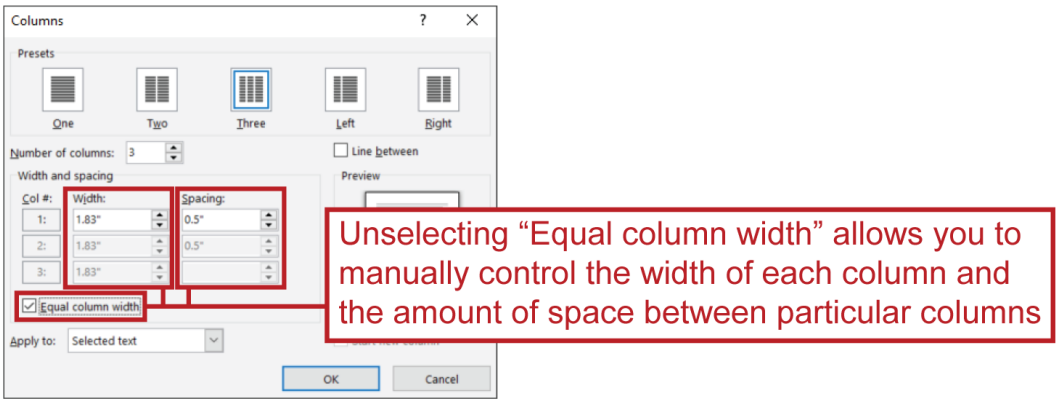
The Columns menu, which includes various columns presets and the More Columns button, used to access the Columns panel, can be found within Word's Layout ribbon.

The Columns panel, which contains all the controls you would use to customize your columns — including controls for number of columns, column width, column spacing, etc. — can be accessed by selecting More Columns within the Layout ribbon's Columns menu.

Tips for Using Columns

Use Column Breaks to control how columns are divided.

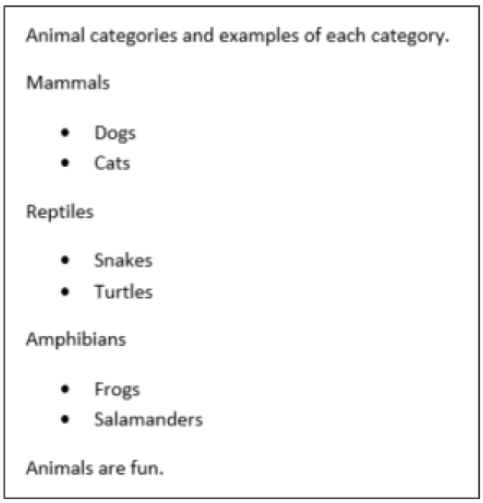
In the Columns panel, if you unselect (i.e., uncheck) Equal column width you can assign a custom width to each column and control the amount of space between particular columns; this allows you to better finesse how content appears in each column.



Use Section Breaks to control where a columned section begins and ends (see example in next series of screen shots).

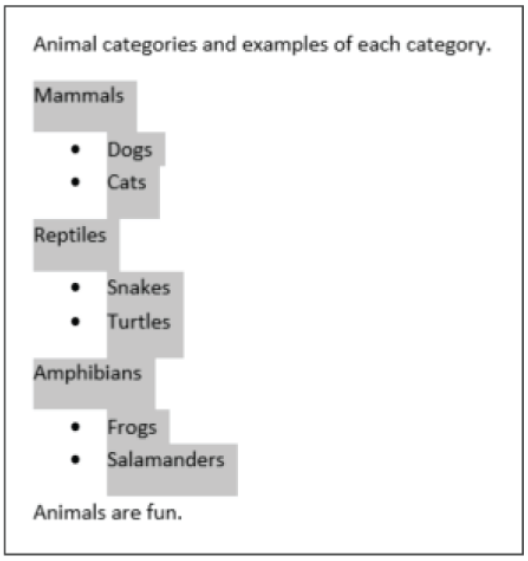
It’s sometimes easiest to arrange content into columns *after* that content has already been added to the document[32]; working in this order will automatically add the Section Breaks for you in the appropriate spots. To do this:

1. Add your content to the document as you normally would

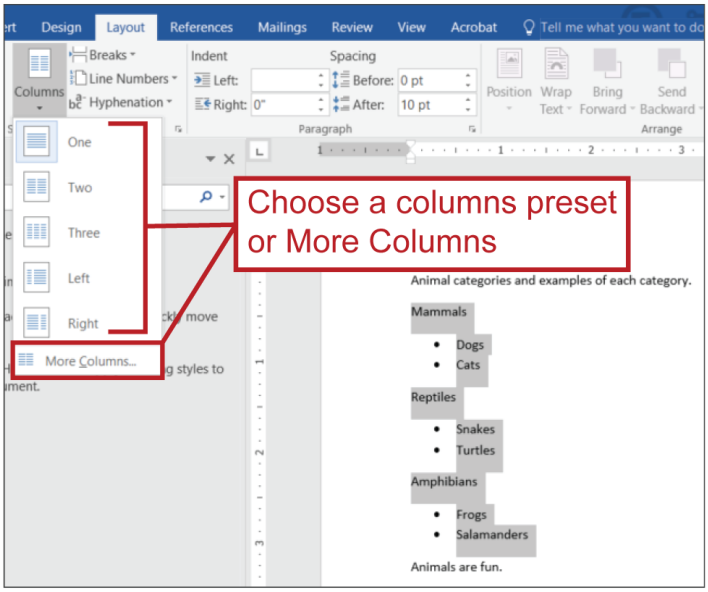


[32] I.e., instead of adding a Section Break to mark the start of a columned section, then adding columns to create the columned section, then adding content to the columns and then adding a Section Break to mark the end of the columned section, try adding the content, then selecting it and arranging it in columns.

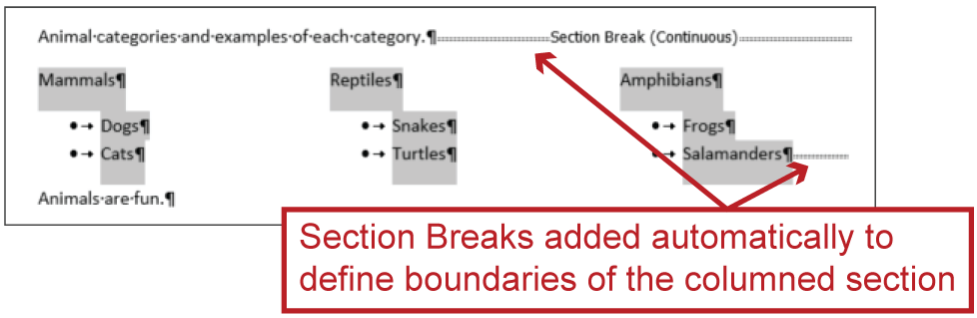
2. Highlight the content you want to arrange in columns



3. Open the Layout ribbon, then Columns menu and select the desired column preset (or select More Columns to customize the column layout you'll be adding)

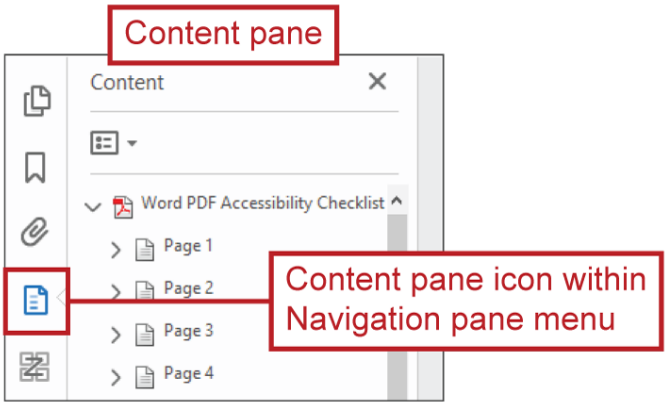


4. Section Breaks will automatically be added before and after the columned section



Content Pane

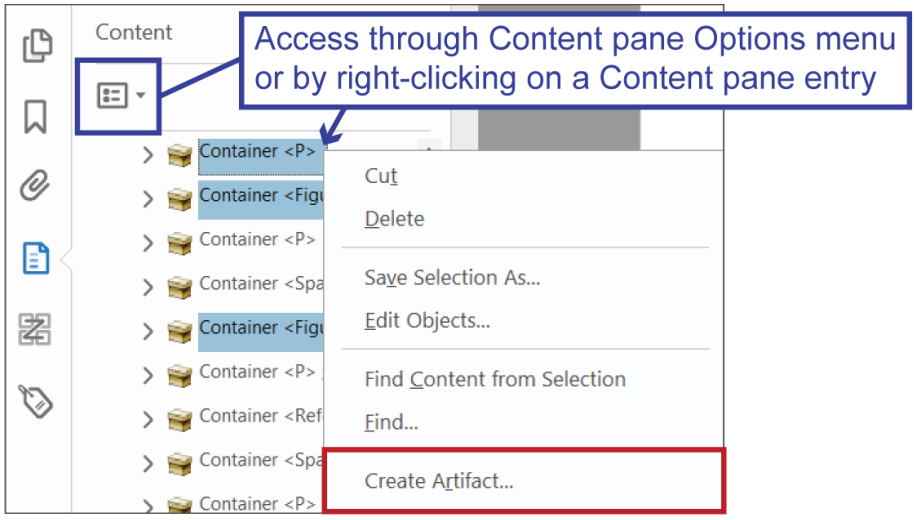
The Content pane allows you to view, and edit certain aspects of, the contents of each page within a PDF. It is one of Adobe Acrobat Pro's Navigation panes.



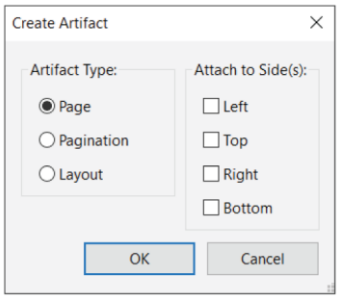
Turning Content into an Artifact ("Artifacting") Through Content Pane

You can turn content into an artifact through the Content pane, thus hiding it from assistive technologies. To do so:

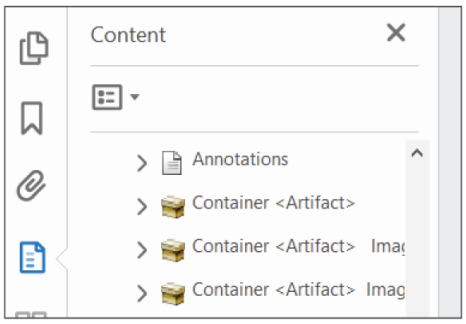
1. Select one or more entries within the Content pane
    a. You can select multiple entries by: a) selecting one entry, holding down the Ctrl (PC) / Cmd (Mac) key and selecting each other entry you want selected; or b) selecting one entry, holding down the Shift key and selecting another entry, which will also result in the selection of all entries between the two initially selected entries
2. Open the Content pane Options menu or right-click a (selected) Content pane entry, and choose Create Artifact



3. In the Create Artifact panel, set the Artifact Type and click OK
    a. Use the Page or Layout type for in-page elements
    b. Use the Pagination type for Header/Footer elements



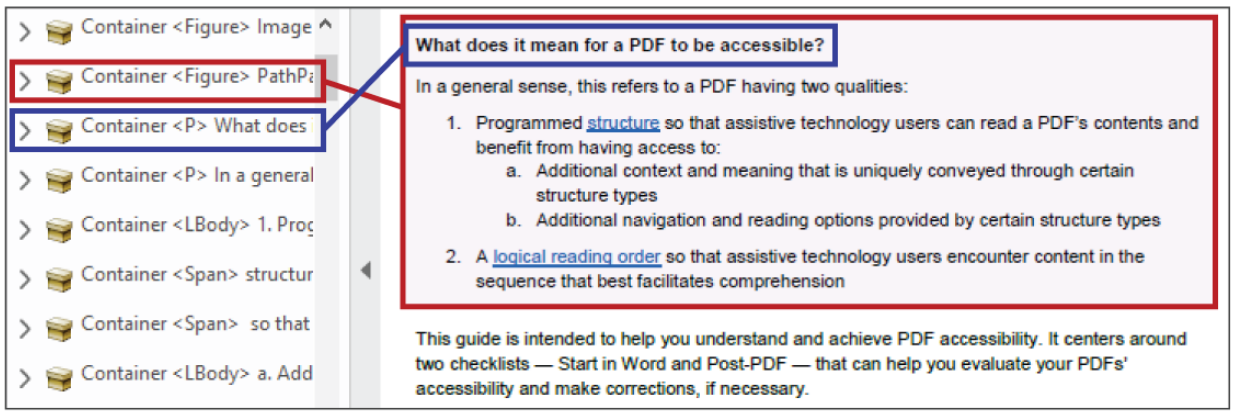
You'll then see the selected entries' container types changed to Artifact.



Control Content Layering and Visibility Through Content Pane (i.e., Change Content Order)

The order of entries within the Content pane reflects how content is layered/stacked/arranged[33] within a page.

This is most pertinent to pieces of content that are layered or stacked atop each other; for instance, in the screen shot below, the highlighted text is layered atop the rectangle behind it.

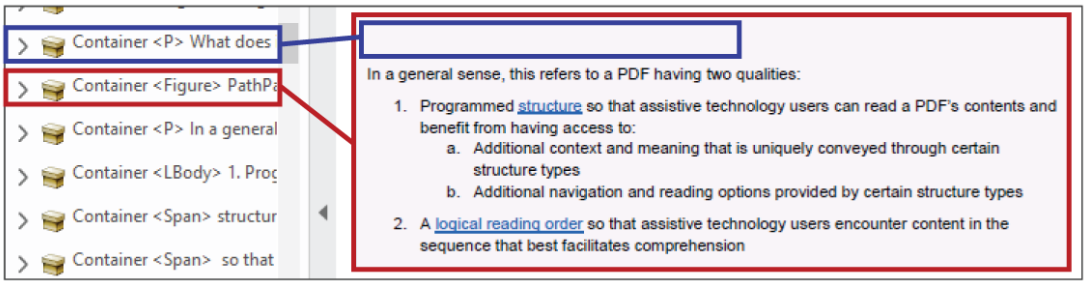


- The higher content is arranged within the Content pane, the lower it is layered within a page
- The lower content is arranged within the Content pane, the higher it is layered within a page

[33] "Arranged," in this instance, refers to the Arrange controls — e.g., Bring to Front, Bring Forward, Send to Back, Send Backward — available in most Microsoft Office products.

You can adjust how content is layered simply by moving its entry within the Content pane.

For instance, continuing to use the example seen in the previous screen shot, if the text's entry in the Content pane is moved above the rectangle's entry, the text will become layered behind the rectangle and effectively hidden from view[34].

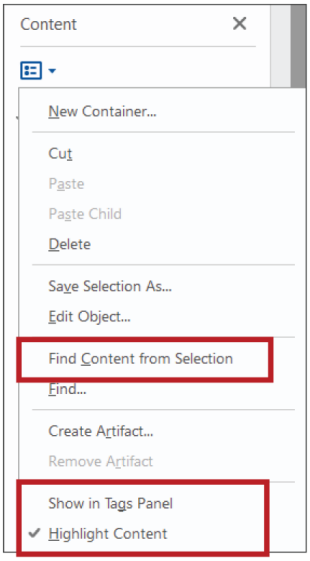


Content Layering in Content Pane, Remediation and Reflow Order Changes

If ever during the course of remediation — such as when changing a page's Reflow order — content seems to disappear from a page, check the Content pane to see if the content didn't really disappear but rather got moved behind another piece of content that is now layered on top of it and hiding its visibility. If/when this occurs, it can be easily corrected by adjusting how content entries are ordered within the Content pane.

Additional Content Pane Features That May Help with Remediation

These features can be found within the Content pane's Options menu or by right-clicking on a Content pane entry.



Find Content from Selection

You can select content within a page and then use the Find Content from Selection feature to highlight the corresponding entry within the Content pane.

Show in Tags Panel

You can select an entry within the Content pane or select content within a page and use the Show in Tags Panel feature to jump to and highlight the content's tag within the Tags pane.

Highlight Content

If the Highlight Content feature/option is checked on, selecting an entry within the Content pane will cause the corresponding content to be highlighted within the PDF.

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[34] Though, not hidden from assistive technologies (for what that's worth).

Document Metadata

A document's metadata provides important contextual information to assistive technology users, such as a document's title, author, subject and keywords/tags[35].

Title and author are especially important, as the former helps users identify what a document is while the latter helps users identify who they need to contact if they experience any issues with the document.

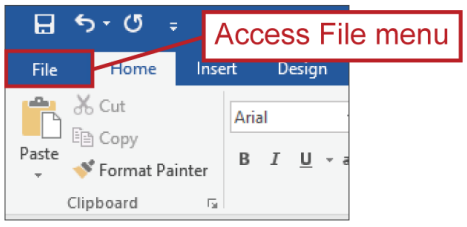
Return to:

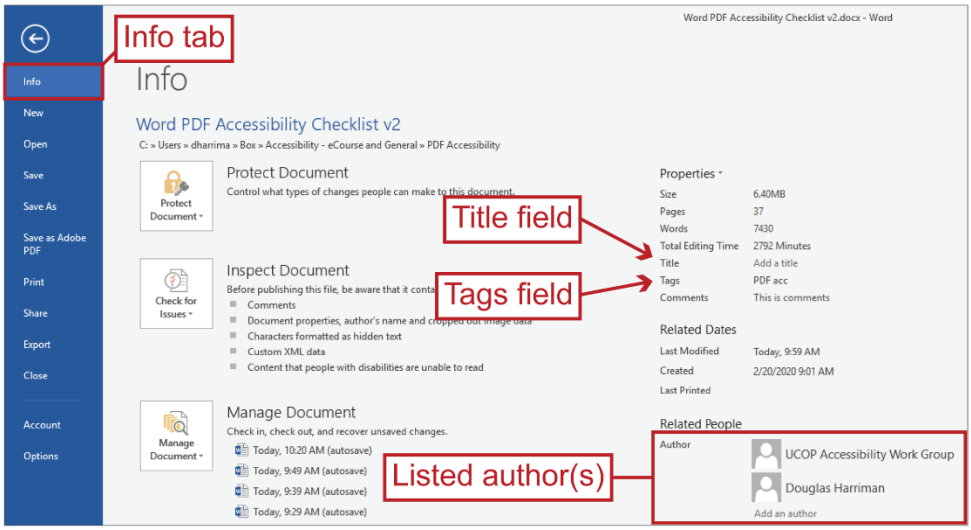
- Item #9. Metadata < Start in Word Checklist
- Item #11. File Name < Start in Word Checklist
- Item #7. Title < PDF Remediation Checklist
- Item #21. File Name < PDF Remediation Checklist

Programming Document Metadata in Word

You can program a document's title, author and keywords/tags within Word so that they carry over to PDF when exported. To do this:

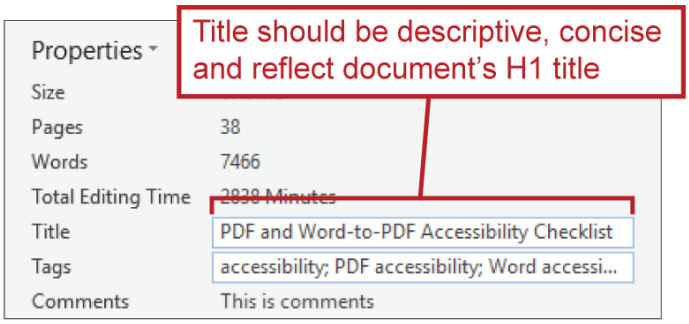
1. (In Word) Open the File menu and then Info tab





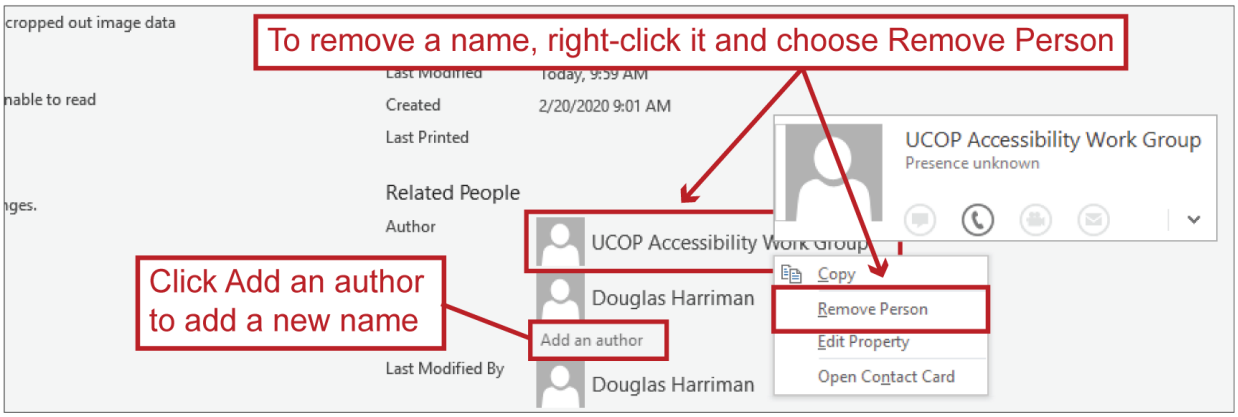
[35] Document metadata can also provide benefits for other digital tools and purposes, such as search engine optimization.

2. In the Properties section, add the document's title to the Title field



   a. The title should be descriptive, concise and reflect the title conveyed through the document's Heading 1[36]

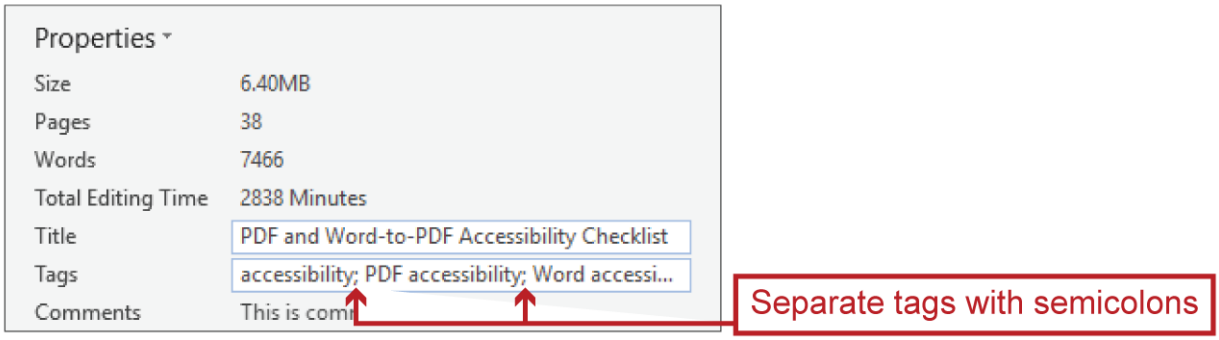
3. Further below, in the Related People section, ensure that the individual(s) and/or group(s) listed under Author is/are the entity/entities most suited to field inquiries about the document



   a. In some cases, it may be best to list a department or unit as the Author instead of an individual; in other cases, it may be best to list both, such as listing the department that owns the document and the individual within that department who should be contacted for inquiries
      i. However, if you add multiple authors, you may need to edit your metadata in Adobe Acrobat Pro after the document has been exported to PDF
   b. You may need to remove a name listed under Author, which you can do by right-clicking on the name and choosing Remove Person
   c. You may need to add an Author, which you can do by clicking the gray "Add an author" prompt text and typing in a new name

[36] Ideally, the file's name will also reflect this title; e.g., document title = "10 Steps for Improving PDF Accessibility," file name: "10_Steps_PDF_Accessibility.pdf"

4. (Optional) You can also add tags/keywords[37] in the Tags field; make sure to separate tags with a semicolon to ensure they're processed correctly



   a. These will make it easier to search for the document, whether through Google or through a UC website's search function
   b. However, if you add multiple tags, you'll need to edit your metadata in Adobe Acrobat Pro after the document has been exported to PDF

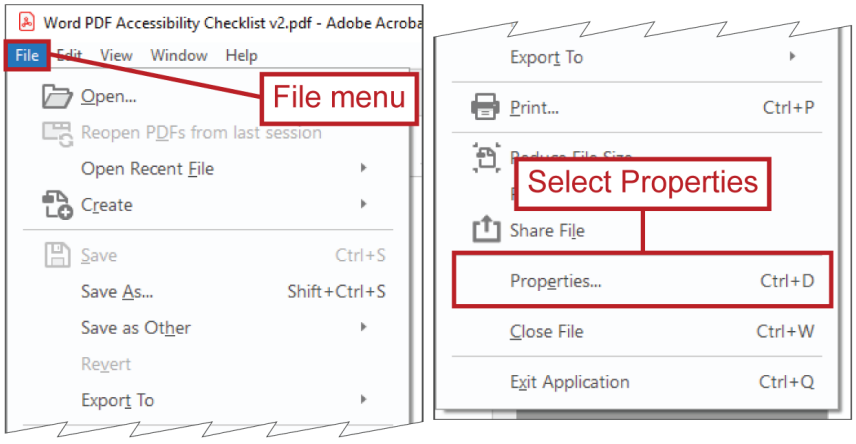
Return to:

- Item #9. Metadata < Start in Word Checklist

Document Metadata in Adobe Acrobat Pro — PDF Properties

To program or verify a document's metadata in Adobe Acrobat Pro:

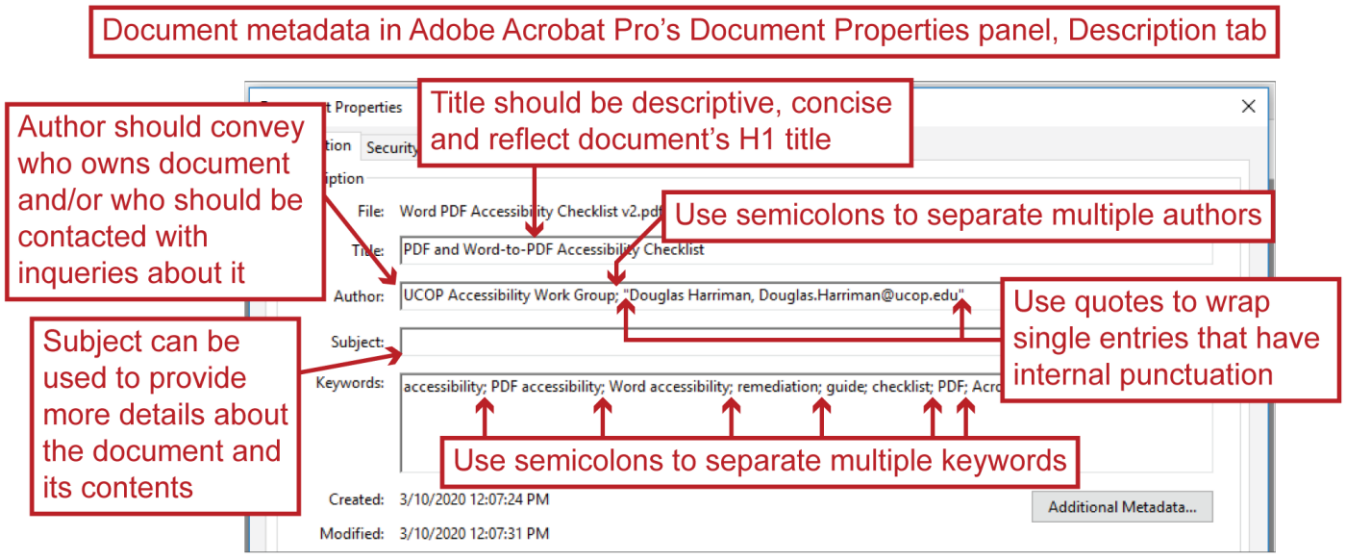
1. Open the File menu
2. Select Properties to bring up the Document Properties panel[38], which should open to the Description tab



[37] In Word, these are called Tags; in Adobe Acrobat Pro, they're called Keywords.

[38] You must be viewing a document for the Properties option to be available in the File menu; the Properties option will be gray and unavailable if you attempt to access it while in Acrobat's Home tab or Tools tab.

3. In the Description tab, add or verify the Title, Author(s), Subject and (optional) Keywords



   a. The title should be descriptive, concise and reflect the document's Heading 1 title
   b. If the document has multiple authors, separate them with semicolons; use quotes to wrap single entries that have internal punctuation
   c. Subject can be used to provide more details about the document and its contents
   d. Separate keywords with semicolons

Return to:

- Item #7. Title < PDF Remediation Checklist

Editing Document Metadata in Adobe Acrobat Pro After Export to PDF

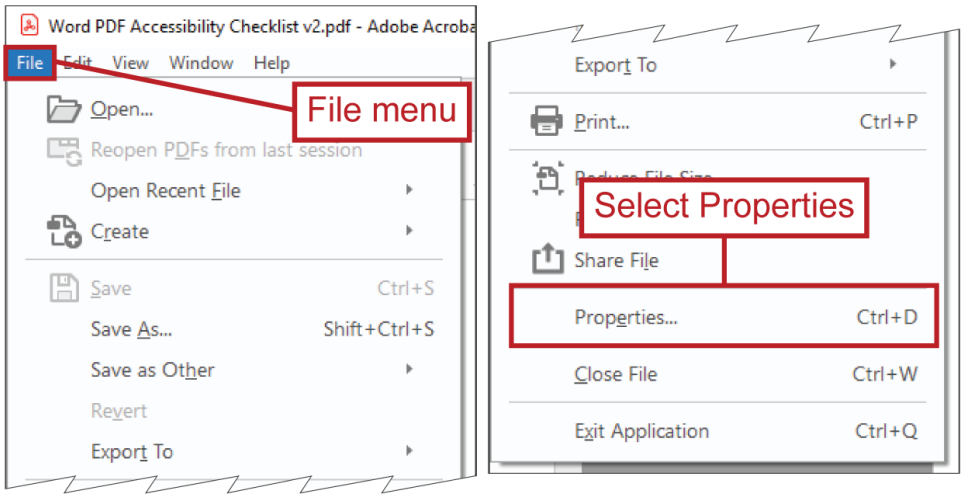
Depending on the nature of the document metadata added in Word, you may need to edit that metadata in Adobe Acrobat Pro after the Word document has been exported to PDF. This will be necessary if:

- Multiple authors are assigned in Word, or…
- Multiple tags/keywords are assigned in Word

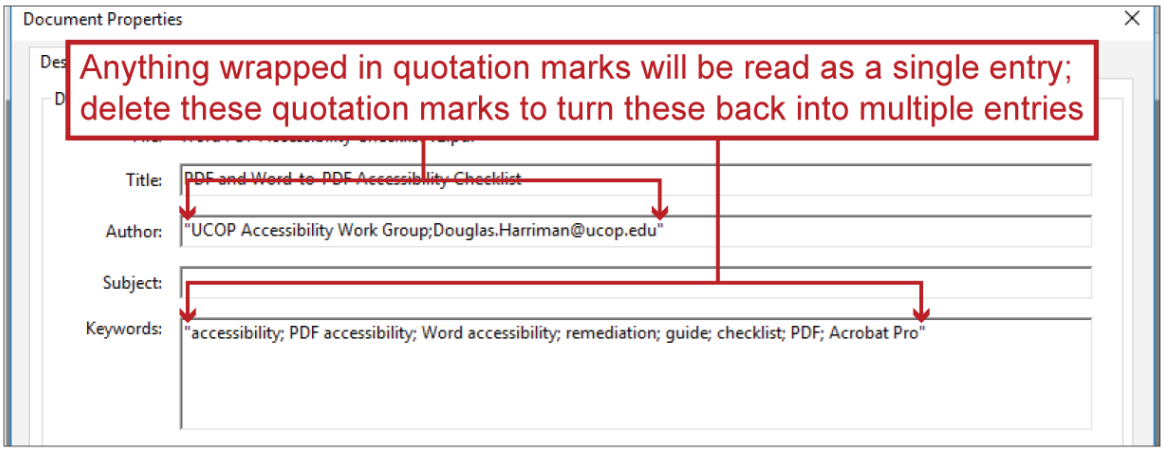
In these cases, the PDF conversion process will turn these multiple entries into single entries by wrapping them in quotes, and you will need to convert them back to being multiple entries by manually removing the quotation marks within the Document Properties panel.

1. Open the File menu

2. Select Properties to bring up the Document Properties panel[39], which should open to the Description tab



3. In the Description tab, delete any quotation marks in the Author and/or Keyword fields that were added when the document was exported from Word to PDF



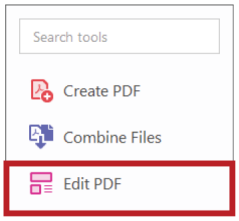
   a. Any entry wrapped in quotation marks will be interpreted as a single entry
   b. Deleting quotation marks allows multiple entries that are separated by semicolons to be interpreted as separate entries

[39] You must be viewing a document for the Properties option to be available in the File menu; the Properties option will be gray and unavailable if you attempt to access it while in Acrobat's Home tab or Tools tab.

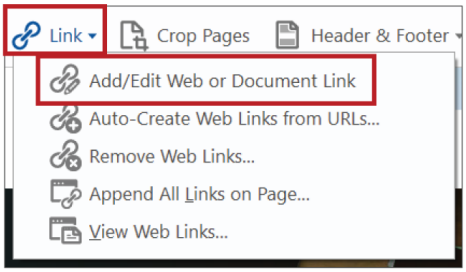
Editing a Link Box in Adobe Acrobat Pro

In Adobe Acrobat Pro, the clickable area associated with a link is defined by a box that you can resize and reposition. To do so:

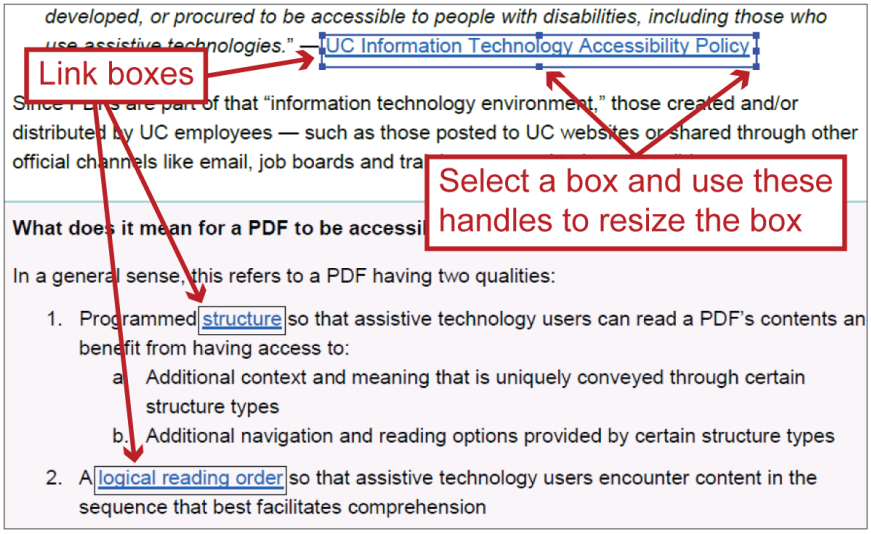
- Open Adobe Acrobat Pro's Edit PDF tool



- Open the Link drop menu found within the Edit PDF tool's toolbar and select Add/Edit Web or Document Link



- You'll see boxes surrounding existing links; you can resize these boxes by selecting them and using their handles to define a different size; and you can move them by selecting them and dragging them to a different position, or by selecting them and using your arrow keys

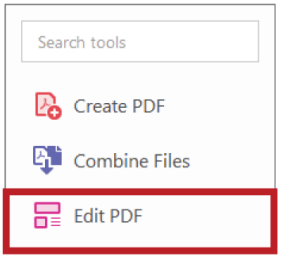


Return to:

- Item #19. Link Text < PDF Remediation Checklist

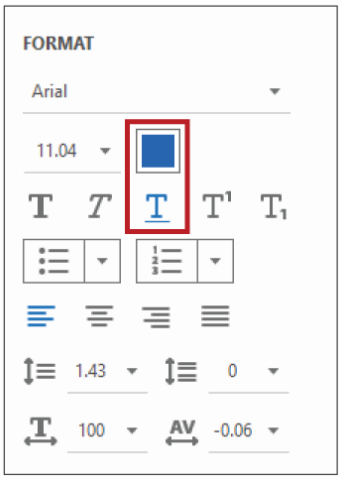
Editing Text in Adobe Acrobat Pro

Use Adobe Acrobat Pro's Edit PDF tool to edit text in a PDF.



Once the tool is activated, you'll be able to select and edit text.

Use the text color and underline controls to make text appear as link text.



The RGB values for Microsoft Word's default link text color are: Red – 5, Green – 99, Blue – 193.

See also:

- Editing a Link Box in Adobe Acrobat Pro

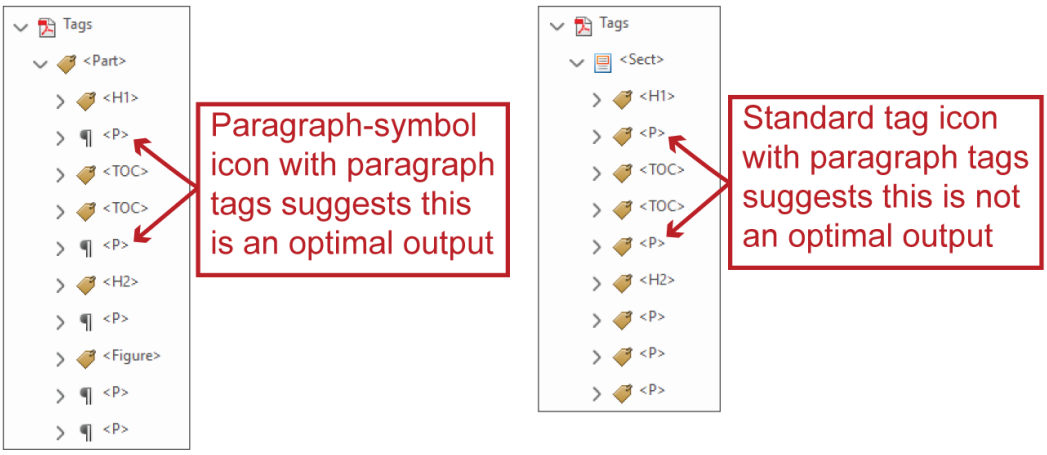
Return to:

- Item #19. Link Text < PDF Remediation Checklist

Exporting from Word to PDF

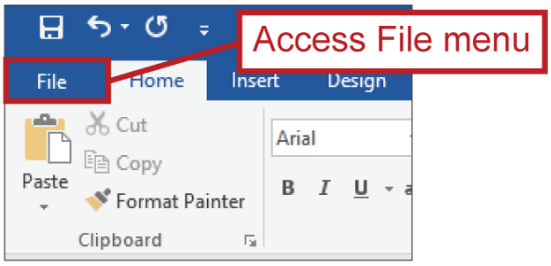
There are multiple ways to export a Word document to PDF. For many, if not most, documents, the Save as Adobe PDF and Create Adobe PDF features[40] offer the best means of maintaining, post export, the accessibility structure, settings and improvements established in Word. With other documents, the traditional Save As feature — with PDF set as the Save as type — will be the better option. So, which should you use?

It's recommend that, for each document you need to export, you start with one method and do a quick check of the tags in the Tags pane to see if the method you chose produced the optimal output; if it didn't, try a different export method. You can recognize an optimal output by looking at the Paragraph tags: if they feature the paragraph-symbol icon, it's an optimal output; if they feature the standard tag icon, it is not an optimal output.



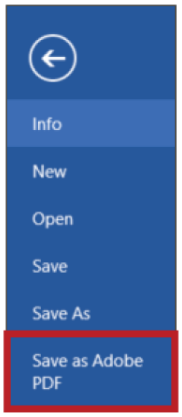
To use Save as Adobe PDF:

1. Open the File menu



[40] Both of which initiate the Adobe PDFMaker, so they're essentially the same export method.

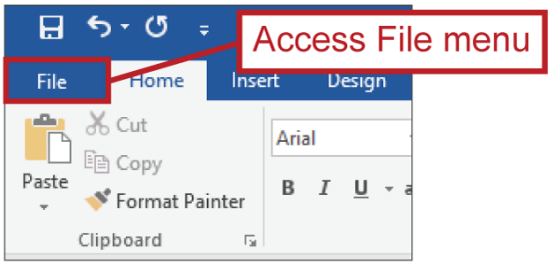
2. Select Save as Adobe PDF



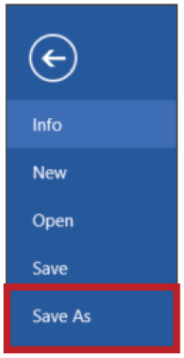
3. Complete the save process as you otherwise would

To use Save As:

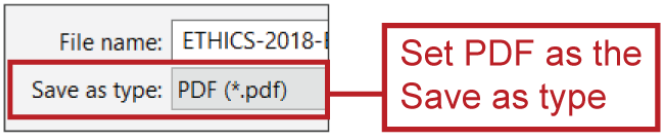
1. Open the File menu



2. Select Save as Adobe PDF



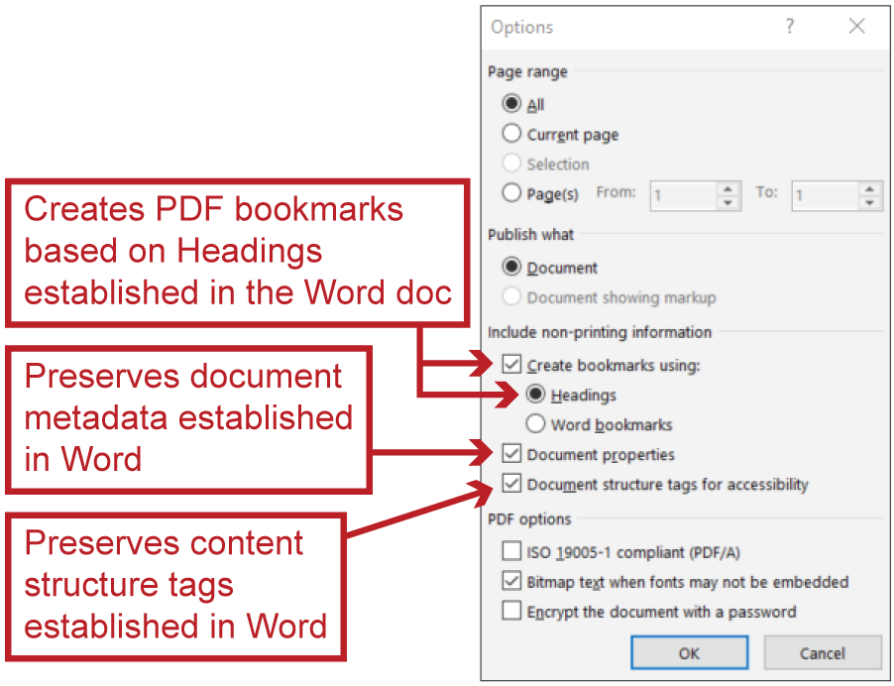
3. Set the Save as type to PDF



4. Click the Options button to open the Options panel



5. Within the Options panel, make sure the following settings are selected:
    a. Create bookmarks using: Heading
    b. Document properties
    c. Document structure tags for accessibility



6. Then click the Options panel's OK button to save these settings
7. Complete the save process as you otherwise would

Return to:

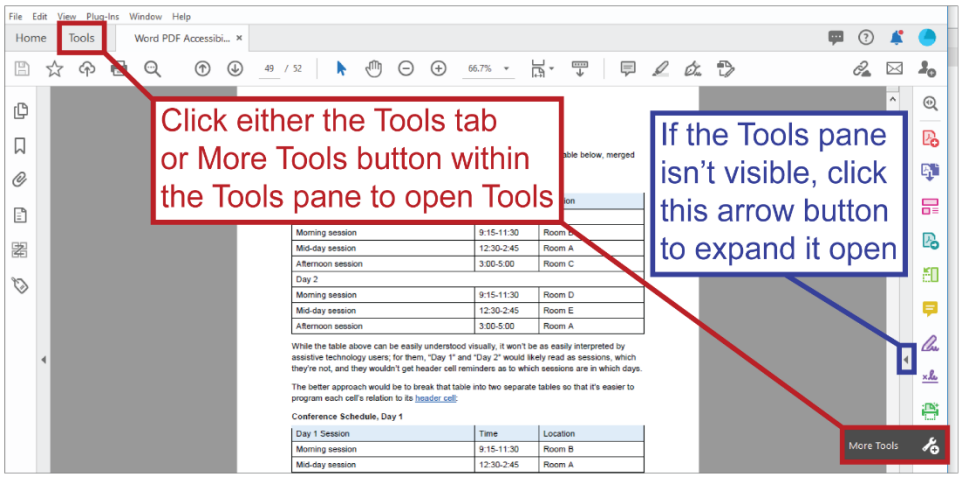
- Item #12. Save as Adobe PDF < Start in Word Checklist

Forms

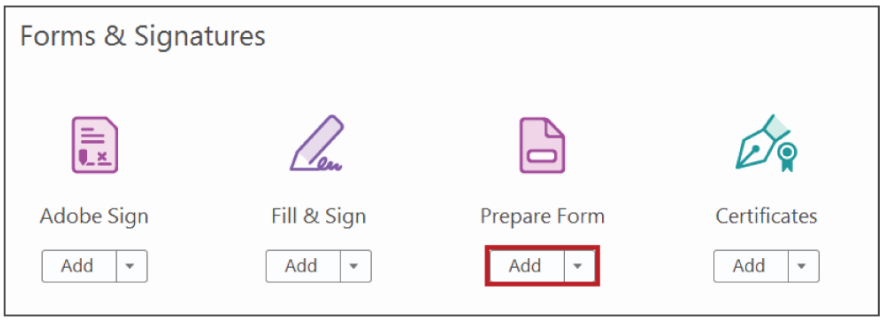
Prepare Form Tool

Adobe Acrobat Pro's Prepare Form tool can be used to add new form fields to a PDF and edit or delete existing form fields. To access the tool:

1. Open the Adobe Acrobat Pro (More) Tools



2. Click the Prepare Form tool's Add button

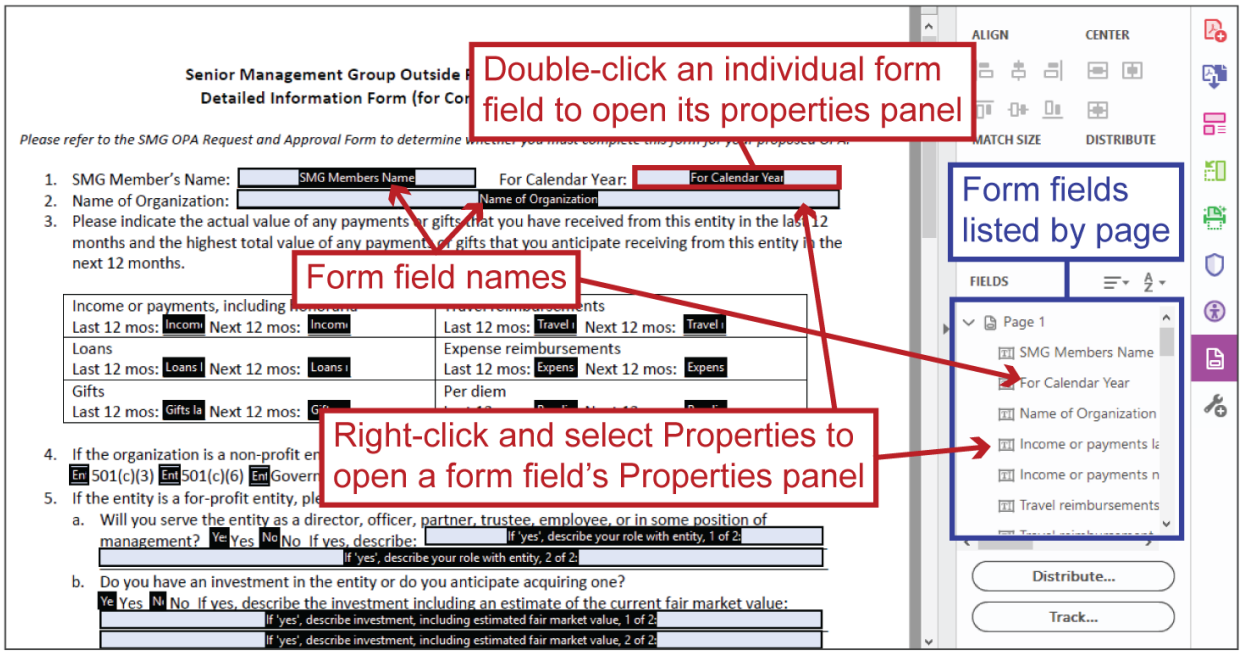


3. Prepare Form will be added to the Tool pane's menu; click it



With the Prepare Form tool open, you can:

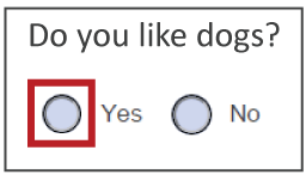
- View form fields' names and tab order
- Double-click an individual form field within the PDF to bring up its properties panel
- Right-click an individual form field within the PDF or within the Prepare Form tool's Fields list and choose Properties to open the form field's properties panel



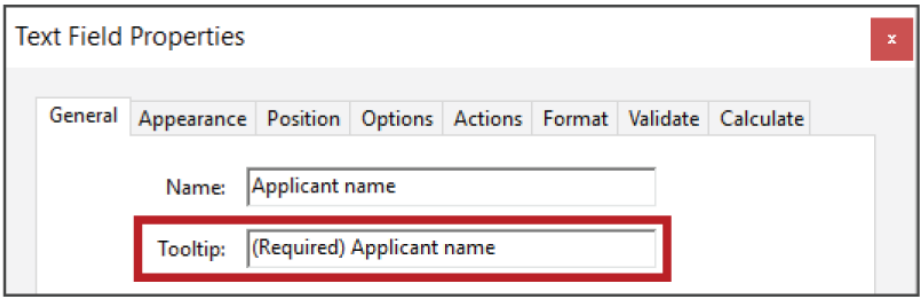
Field Description, a.k.a. Tooltip

A form field's Field Description, also known as a Tooltip, determines what assistive technologies will read when they encounter the form field. A form field's Tooltip should:

- Be unique so that assistive technology users can differentiate the various form fieldfs — i.e., no two form fields in a single PDF should have the same Tooltip
- Clearly and concisely communicate what should be entered into the form field
- Share a relation with any text connected to the form field so an assistive technology user can better understand that all those elements are tied together
    - For example, the Tooltip of "Yes, I like dogs," makes a lot of sense for the form field highlighted in the screen shot below because it's clear and concise and connects the form field to both the preceding question, "Do you like dogs?," and the associated choice text, "Yes."



- If a form field is required, that must be communicated through the Tooltip
    - For example:

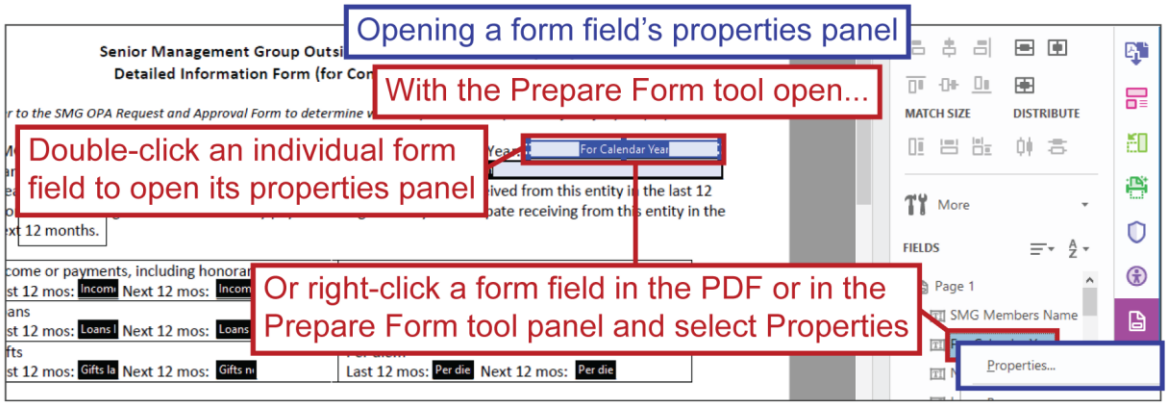


Return to:

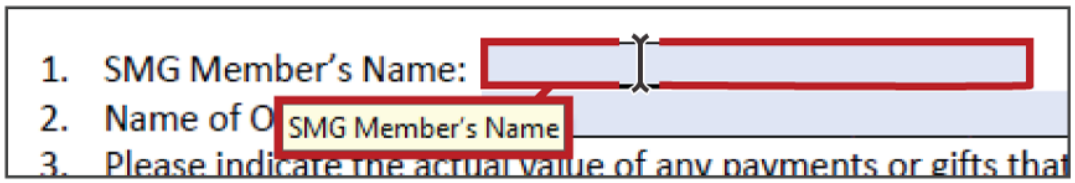
- Item #12b. Field Descriptions < PDF Remediation Checklist

Examining Tooltips

You can view each form field's Tooltip by opening its properties panel: with the Prepare Form tool open, double-click on a form field in the PDF or right-click a form field within either the PDF or Prepare Form tool's Fields list and select Properties.



Another method for examining a form field's Tooltip is to hover your cursor over the form field while the Prepare Form tool is not open; the form field's Tooltip should appear.



Return to:

- Item #12c. Unique Field Description/Tooltip < PDF Remediation Checklist

Editing a Form Field's Tooltip

To edit a form field's Tooltip:

1. Right-click on the form field and within the resulting menu, select Properties to open the form field's Properties panel
    a. Or double-click the form field within the PDF
2. The Properties panel should open with the General tab displayed; if not, open the General tab
3. Enter the form field's Tooltip into the Tooltip field
4. While you're at it, give the form field a unique name; you can even just copy the Tooltip you've entered and paste it into the Name field
5. Click the Close button to save your changes

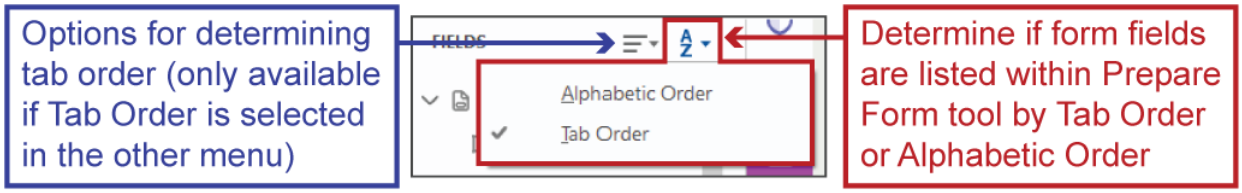
Return to:

- Item #12c. Unique Field Description/Tooltip < PDF Remediation Checklist

Form Field Tab Order

The form field tab order determines the order in which form fields will be encountered by users who are using the Tab key to jump from one interactive element — like a link or a form field — to the next.

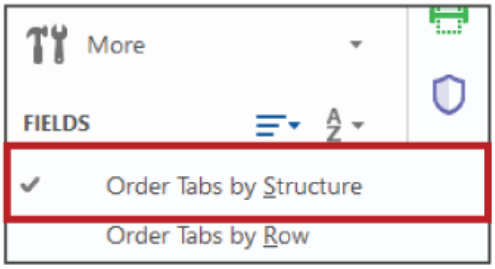
The two drop menus in the Prepare Form tool's Fields area are significant in this regard: the first contains options for determining tab order; the second determines if form fields will be listed in the Prepare Form tool's Fields area by alphabetic order or by tab order, and if alphabetic order is selected, the first menu will not be available.



For accessibility purposes, you should:

1. Select Tab Order in the second menu, thus enabling you to control form field tab order through the first menu

2. Select Order Tabs by Structure in the first menu



   a. This option uses the tag order in the Tags pane to determine tab order and is ideal because it allows other interactive elements — namely, links — to appear where they should in the tab order in relation to form fields[41]; if a different option is selected — such as Order Tabs Manually, which affords you direct, custom control over the form field tab order — users using the Tab key will encounter all form fields and then all other interactive elements

Return to:

- Item #12d. Form Field Tab Order < PDF Remediation Checklist

Tagging Form Fields

Form fields can be tagged using the Reading Order tool or the Tags pane's Find feature — see:

- Tagging Form Fields Using Reading Order Tool
- Tagging Form Fields Using Find

Return to:

- Item #12a. Tagged Form Fields < PDF Remediation Checklist

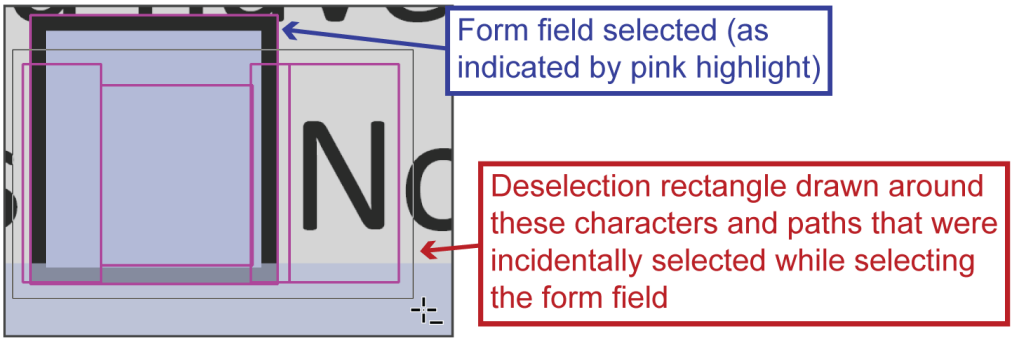
Tagging Form Fields Using Reading Order Tool

To tag a form field using the Reading Order tool:

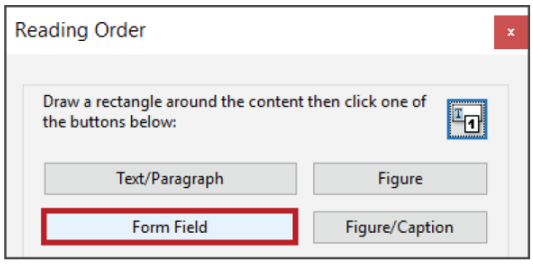
1. Open the Reading Order tool

[41] For example, if a form field is preceded by a link that helps users understand what they should enter into the form field, you want users to encounter that link before they encounter the associated form field.

2. Draw a selection rectangle around the form field and make sure that no other content is selected
    a. You may have to hold down the Ctrl (PC) / Cmd (Mac) key and draw an deselection rectangle around any non-form field content that may have been incidentally selected



3. Click the Form Field button within the Reading Order tool panel



4. The resulting tag will likely appear at the bottom of the PDF's tag order; locate it and drag it to its correct reading order within the tags pane

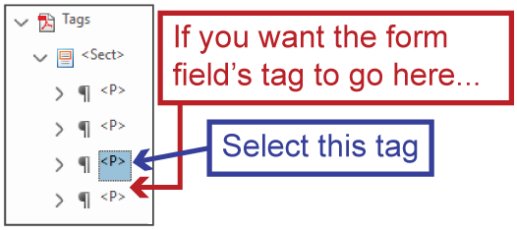
Return to:

- Item #12a. Tagged Form Fields < PDF Remediation Checklist

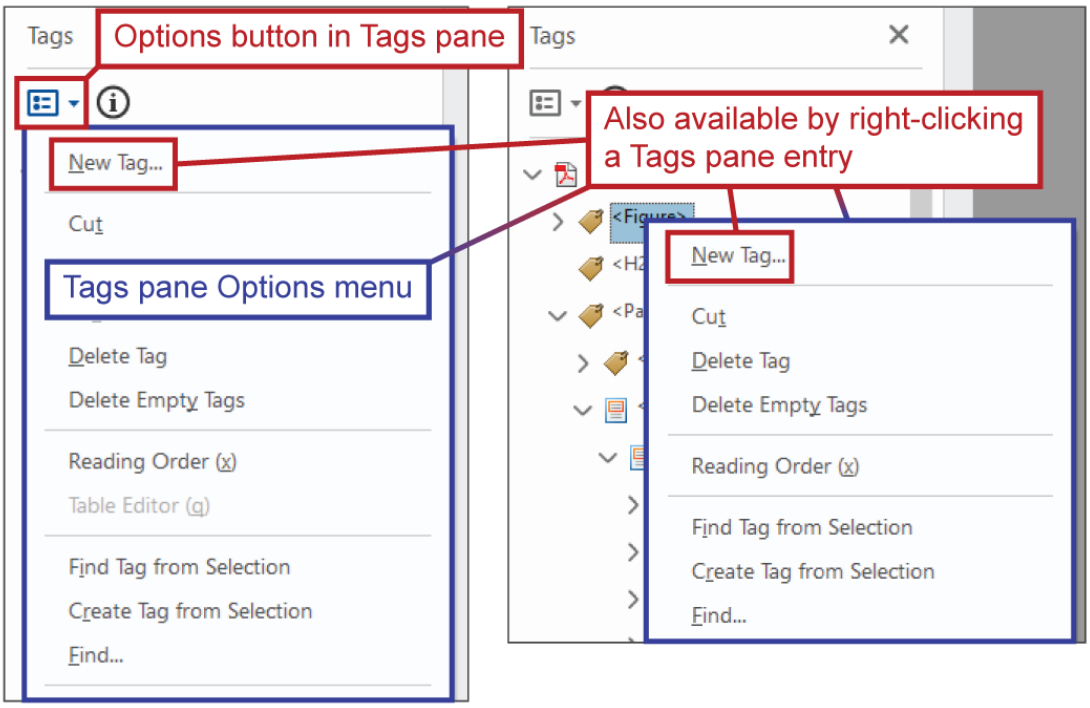
Tagging Form Fields Using Find

You can also tag form fields using the Tags pane's Find feature:

1. In the Tags pane, select the tag just before the position you want the form field's tag to take in the PDF's reading order

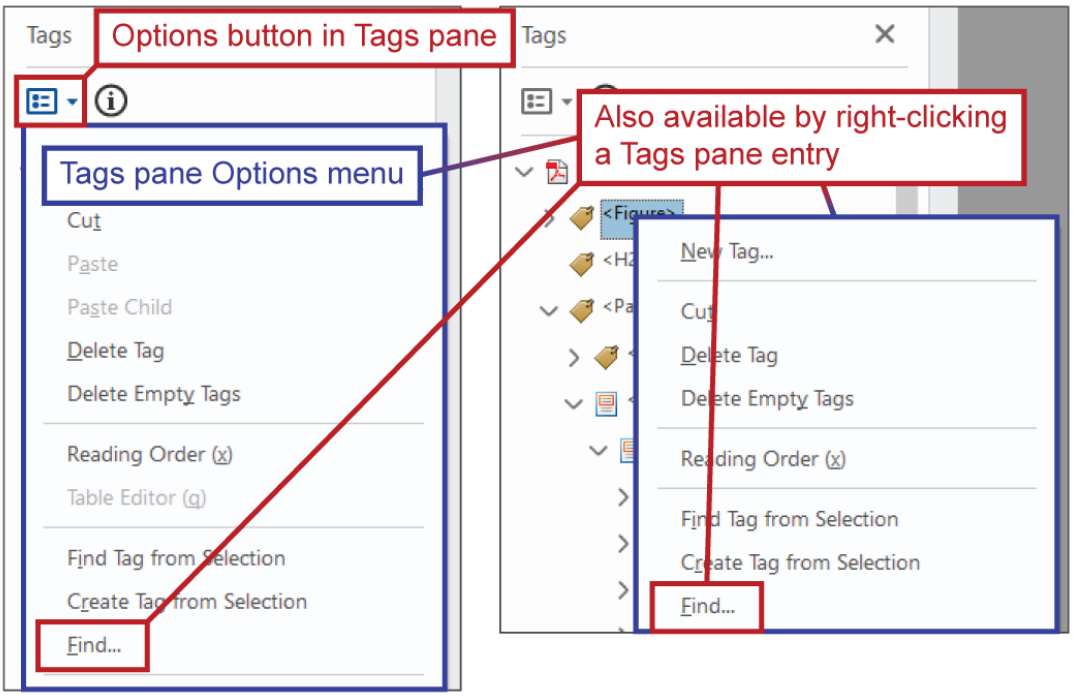


2. Open the Tags pane's Options menu and select New Tag

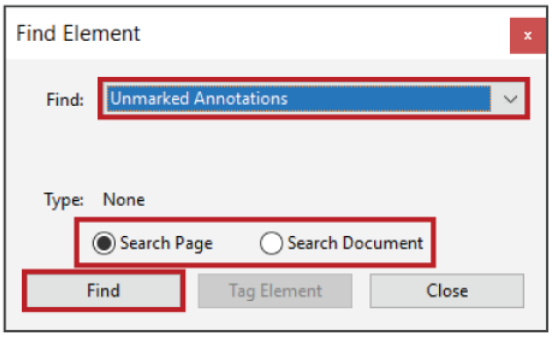


3. Choose Form as the new tag's Type
    a. This will create an empty <Form> tag container positioned after the tag you had previously selected
    b. Now, you need to fill that container with the form field's tag content; to do this…
4. Select the <Form> tag container you just created

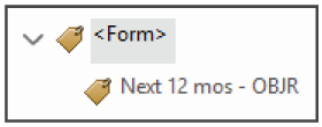
5. Open the Tags pane's Options menu and select Find



6. In the Find drop menu, select Unmarked Annotations, adjust the Search parameters if needed, then click the Find button



7. If the form field you're seeking to tag is not initially highlighted, click the Find Next button until it is highlighted
8. Once the form field you're seeking to tag is highlighted, click the Tag Element button
    a. The form field's tag contents will then be added to the <Form> tag container you created and selected



Return to:

- Item #12a. Tagged Form Fields < PDF Remediation Checklist

Headers/Footers

In Microsoft Word, Headers and Footers are independently controlled sections at the top and bottom (respectively) of each page, separate from the main, body section. They can be added through Word's Insert ribbon or by double-clicking within either section on a page. Headers/Footers have various settings that allow for them to be established uniformly across all pages or differently across select sections (as defined by Section Breaks) and/or pages[42].

Return to:

- Item #10. Headers and Footers < Start in Word Checklist

Header/Footer Accessibility

Header/Footer content can be difficult for assistive technologies to access and interpret within Word.

Most Header/Footer content will be automatically turned into artifacts when exported to PDF, which means they cannot be read by assistive technologies unless you manually remediate them in Adobe Acrobat Pro. A notable exception to this is images that have been inserted into a Header/Footer and giving the "Behind Text" text wrapping setting; such images will be tagged as Figures when exported to PDF (and thus, are readable by assistive technologies), and they may also be misplaced within the tag/reading order.

In light of all this, you should avoid (or take caution when) placing in Headers or Footers:

A. Any contents that need to be read
B. Images that have the "Behind Text" text wrapping setting

Return to:

- Item #10a. Decorative Header/Footer Content < Start in Word Checklist
- Item #10b. Repeated Header/Footer Content < Start in Word Checklist

[42] Such as having a certain header (or no header) on the first page and a different header (or no header) on all other pages; or having a certain footer (or no footer) on all odd-numbered pages and a different footer (or no footer) on all even-numbered pages.

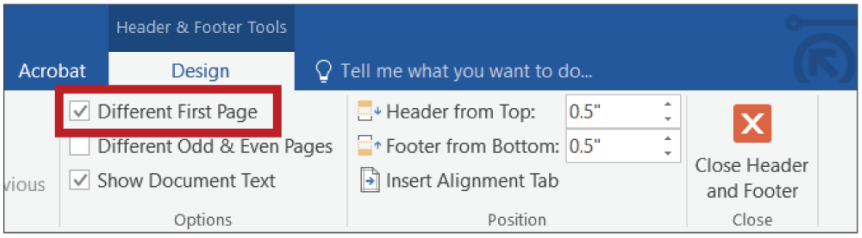
Strategy for Header/Footer Accessibility

Often times, Header/Footer contents really only need to be read once or twice within a document. For example, consider the document title and UC wordmark seen in the screen shot below.



An assistive technology user would need to read them at the beginning of the document to know the document's title and understand that there's UC branding present, but they wouldn't want to hear those elements repeated at the beginning of every page; that would get tiresome and potentially confusing. The best way to accomplish this distinction in Word is to use the Different First Page Header/Footer option along with a few other Layout features. Here's what you'd do:

1. Double-click on the first page's Header section so it can be edited
2. Select the Header contents and Copy them (Ctrl / Cmd-c)
3. In the Header & Footer Tools Design ribbon, select (i.e., check) the Different First Page setting, which enables you to assign a different Header to the first page than is assigned to all other pages



   - This should result in the Header being removed from the first page and remaining on the other pages, but if not, manually delete the first page's Header content and Paste (Ctrl / Cmd-v) the Header content you previously copied into the second page's Header section
4. Exit the Header/Footer view by clicking the Close Header and Footer button or by double-clicking within a page's main, body section

5. Paste the Header content you previously copied into the top of the first page's main, body section
    - Now assistive technologies will be able to read this first instance of the title and wordmark and will ignore all the other instances that still reside in other pages' Header sections
    - Since the first page instance isn't in a Header section, it may be positioned slightly lower on its page than the other instances are on their pages; if this is a problem — i.e., if every instance needs to look *exactly* the same — place a Section break beneath the first page's instance so that you can give the first page a different/smaller top of the page margin than the other pages, which will move the first page's instance higher

This strategy won't work for every situation or for all types of content. Sometimes you'll just have to take a different theoretical approach to presenting your content — one that doesn't involve Headers or Footers, or certain bits of content being repeated visually on all, or most, pages — while other times you'll simply have to remediate select pages' Header/Footer contents after the document has been exported to PDF.

Return to:

- Item #10b. Repeated Header/Footer Content < Start in Word Checklist

Heading Hierarchy

Heading hierarchy refers to:

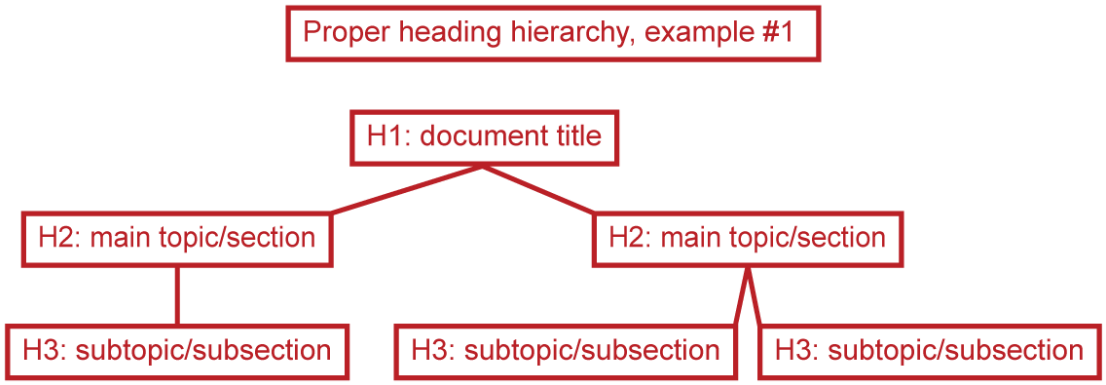
- The way in which headings are assigned specific levels (i.e., heading numbers)
- The way in which headings are organized in relation to each other
    - Much like how topics are organized and "nested" in an outline or list based on their relations to each other
- The way in which headings are used to establish sections[43] within a document

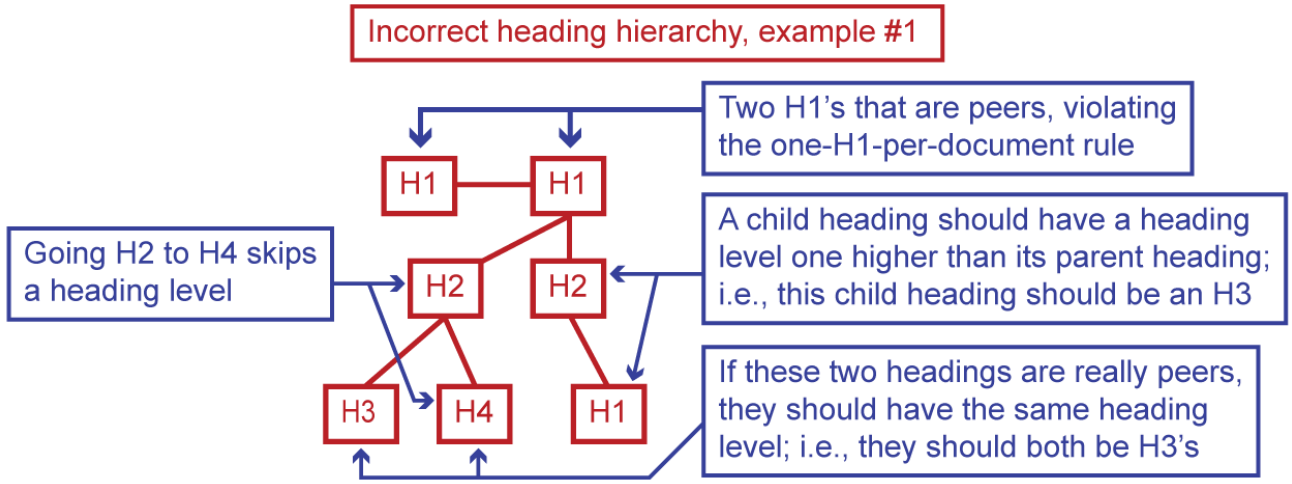
In a proper heading hierarchy:

- The first heading is a Heading 1 (H1)
    - Many accessibility advocates are of the opinion that (in most circumstances) a document's title should be the lone H1 within the document

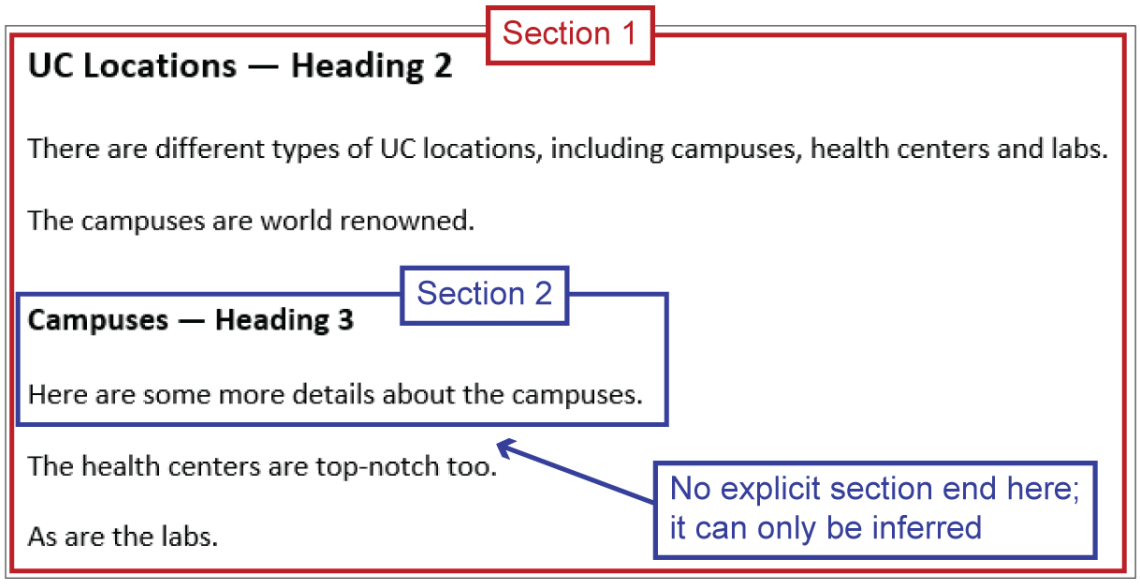
[43] As used here, the word "sections" refers to groupings of content as defined by headings and not sections in a Word document as defined by Section Breaks.

- Headings that have a peer relation to each other should have the same heading level
    - The one-H1-per-document position holds that the H1 is the only heading that should not have a peer because: if the H1 reflects the document title, which in turn reflects the entire document, nothing else within the document can logically be a peer of the entire document; all other headings have to be children of the H1
- Headings that have a child relation to a parent heading should have a heading number one higher than their parent heading
    - E.g., if the parent heading is a Heading 3 (H3), the child heading should be a Heading 4 (H4)
- Heading levels should not be skipped
    - E.g., A heading hierarchy of H1 to H2 to H4 would be incorrect because H3 was skipped; H1 to H2 to H3 to H4 would be correct
- Headings mark the end of the previous section and the beginning of a new section
    - The practical impact of this is that headings cannot be used to put a section in the middle of another section because there would be no heading marking the end of the middle section and the recommencement of the initial section

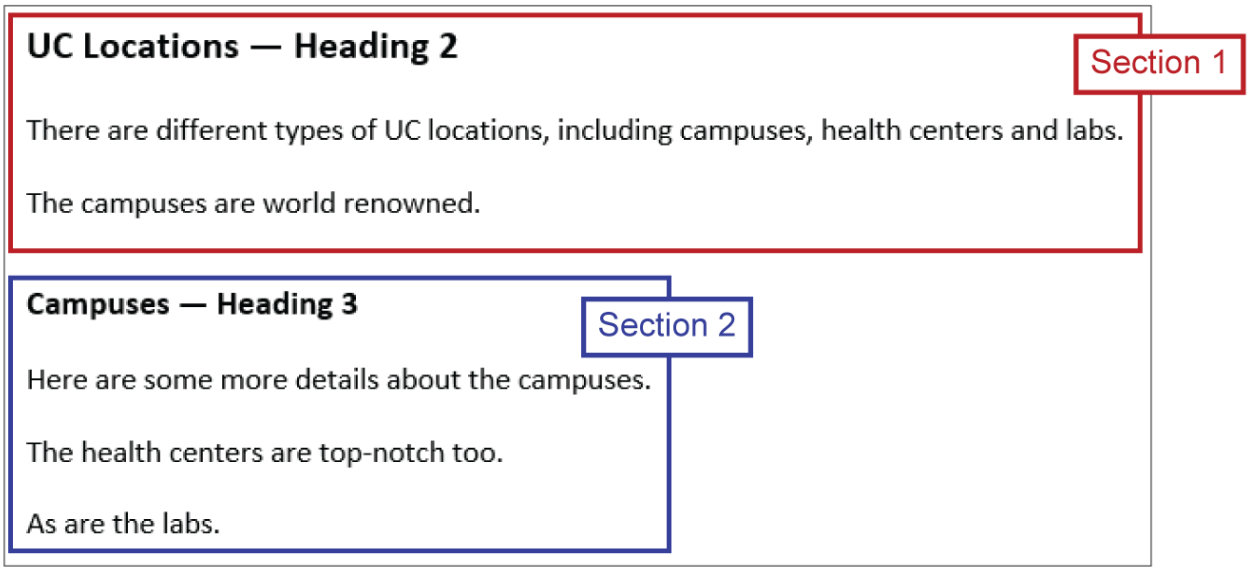




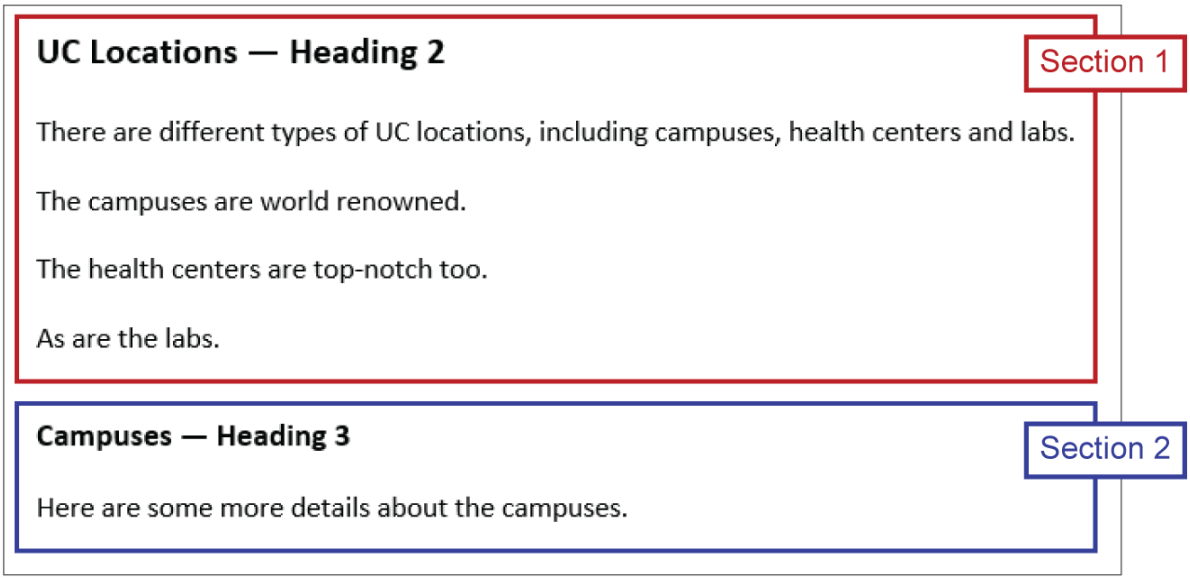
Incorrect heading hierarchy, example #2
The author wants you to read Section 2 as if it's an island within Section 1, but even sighted users won't know with 100% certainty where Section 2 ends and Section 1 recommences; they can only make an assumption based on context clues



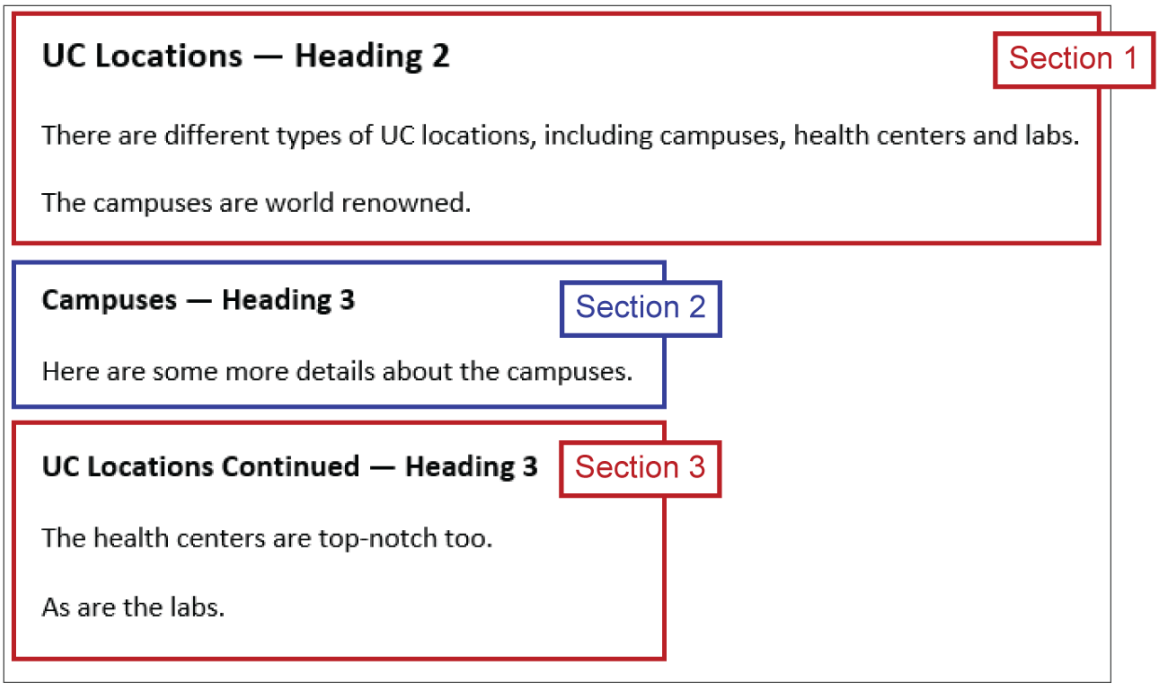
Assistive technologies will interpret the section organization like so:



Proper heading hierarchy, example #2a: this organization would be much easier for all users, including assistive technology users, to interpret properly



Proper heading hierarchy, example #2b: this organization would also be easier for all users, including assistive technology users, to interpret properly



Return to:

- Item #1. Headings < Start in Word Checklist
- Item #1d. Heading Hierarchy < Start in Word Checklist
- Item #18. Appropriate Nesting < PDF Remediation Checklist

Document Title as the Document's Only Heading 1

Having the document's title serve as the document's only Heading 1 helps establish a proper, functional heading hierarchy that assistive technology users can easily understand and navigate, and it helps provide an important, early-in-the-document contextual clue by affirming what the document is and what it contains.

Return to:

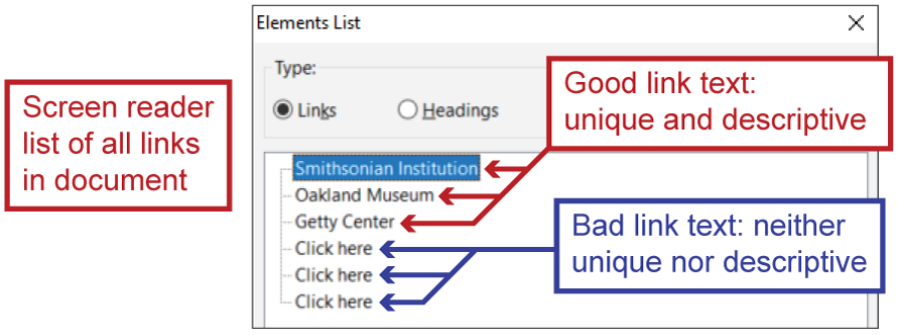
- Item #1c. Document Title < Start in Word Checklist

Link Text

Link text refers to a text segment that is used to host a hyperlink. For example, here is link text directing to the UCnet website ("UCnet" is the link text).

It is important that link text be unique[44] and descriptive of the linked destination or material; do not use generic link text — like "click here" or "more" — or the same link text to direct to different destinations — like this example and this example.

This is because assistive technology users have multiple ways of engaging with links, including two methods — 1) jumping directly from link to link; and 2) generating a list of all links within a document (as seen in the following screen shot) — that only present them with each link's link text and no other contextual information, so they need link text that, on its own, provides the best possible sense of where, or to what, each link directs.



Return to:

- Item #5. Link Text < Start in Word Checklist
- Item #19. Link Text < PDF Remediation Checklist

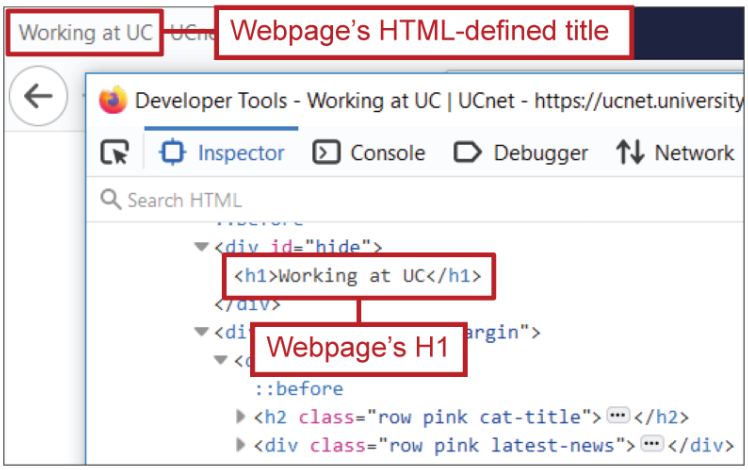
[44] An important-to-note exception: if you have multiple links within a document that all direct to the same destination, each of those links can share the same link text; they do not each need unique link text. E.g., UCnet, and then later, UCnet.

Link Text Best Practices

Avoid using URLs as link text[45].

If you're linking to a file, include the file format in the link text. For example, "2020 Program Information & Nomination Process (pdf)."

Try to align link text with one or more of the destination's primary contextual clues, like it's Heading 1, its (HTML-defined or document metadata-defined) Title, a specific section within a webpage[46], or its file name; that way assistive technology users can easily confirm they ended up where, or with what, they expected. For example, Working at UC aligns with both the destination webpage's HTML-defined title and its H1.



Return to:

- Item #5a. Link Text Best Practices < Start in Word Checklist

---

[45] URLs do a poor job of clearly and concisely conveying a link destination. For example, even the simplest of URLs like https://www.google.com is significantly longer than its non-URL equivalent, Google. Imagine being a screen reader user and how tedious it would be having to hear each character individually read to you before you even got to the actionable portion: "h-t-t-p-s-slash-slash-w-w-w-dot…"; now imagine an even longer URL and how much worse that would be.

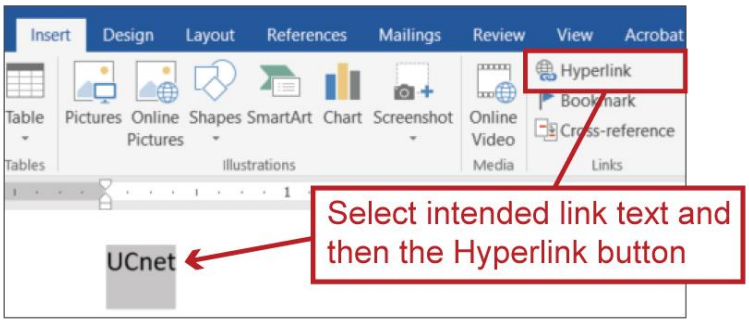
At least https://www.google.com contains "google" and thus, gives you a sense of the destination; some URLs contain no information that would help one get a sense of the link destination.

[46] Applicable if a link directs to an anchor within a webpage. The link contained within this sentence will help you understand what an anchor is and is itself an example of linking to an anchor. Anchor links can be identified by the presence of a # symbol toward the end of the URL.

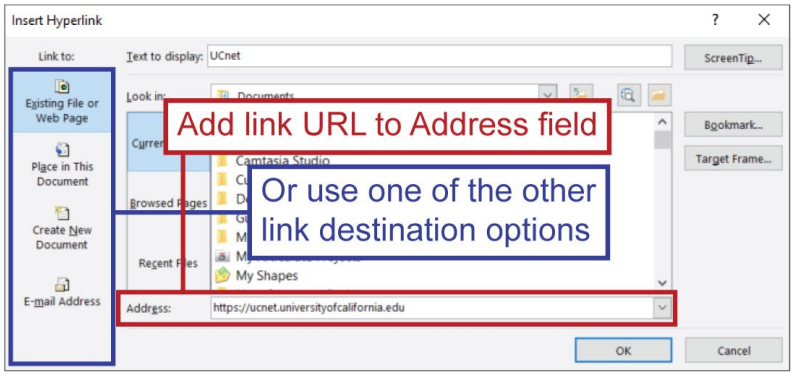
Creating Links in Word (Insert Hyperlink)

The most reliable way to create links in Word[47] is to:

1. Type out the link text
2. Select the link text
3. Open the Insert Ribbon and select the Hyperlink button, or use the insert hyperlink keyboard shortcut, Ctrl-k (PC) / Cmd-k (Mac)



4. Add the link URL to the Address field or use one of the other link destination options (e.g., Place in This Document, E-mail Address)



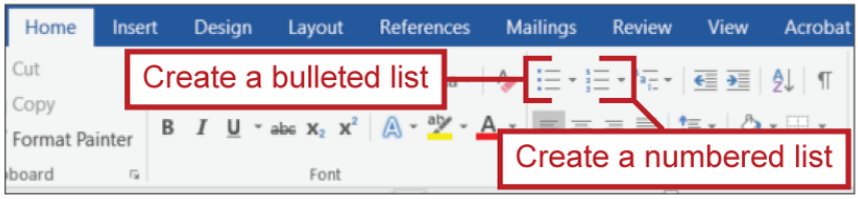
5. Click the OK button to finalize the process

Lists

The act of grouping content into a list conveys a particular relationship between list items; that relationship must also be programmed and conveyed in a way that assistive technologies can interpret: i.e., lists that must be tagged as lists in order to be properly interpreted by assistive technologies.

[47] I.e., the method that most reliably results in links being tagged properly when exported to PDF...

In Word, a list must be created using either the Bullets or Numbering features in order for it to be properly tagged as a list when the document is exported to PDF.



See also:

- Different List Levels (Sub-Lists)
- Common List Error the Adobe Acrobat Pro Accessibility Checker Will Miss

Return to:

- Item #6. Lists < Start in Word Checklist

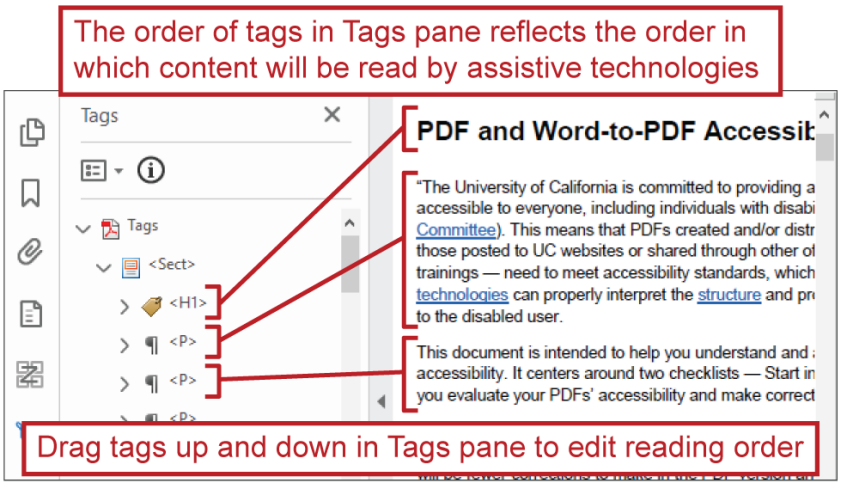
Logical Reading Order

Content needs to be presented to assistive technologies in the order that best facilitates comprehension and reflects how the content would be read visually[48]: i.e., content needs to be presented in a logical reading order.

In Word, reading order is dictated by the order of content within a page; however, Reflow order will treat inserted elements — like images, shapes, text boxes, etc. — differently when a Word document has been exported to PDF and may need to be manually adjusted in Adobe Acrobat Pro.

[48] For example, let's say a section consists of a heading, introductory blurb and a three step process for how to do something. If that content is presented to assistive technologies users in this order — step #3, step #1, introductory blurb, step #2, heading — they'll be less able to comprehend it. It needs to be presented in this order — heading, introductory blurb, step #1, step #2, step #3 — since that's the reading order that best facilitates comprehension and best reflects the way in which that content would be read visually.

In PDFs, reading order is tied to the order in which tags are sequenced. In Adobe Acrobat Pro, the reading order/tag sequence can be viewed, and edited (by dragging tags to different positions), within the Tags pane.

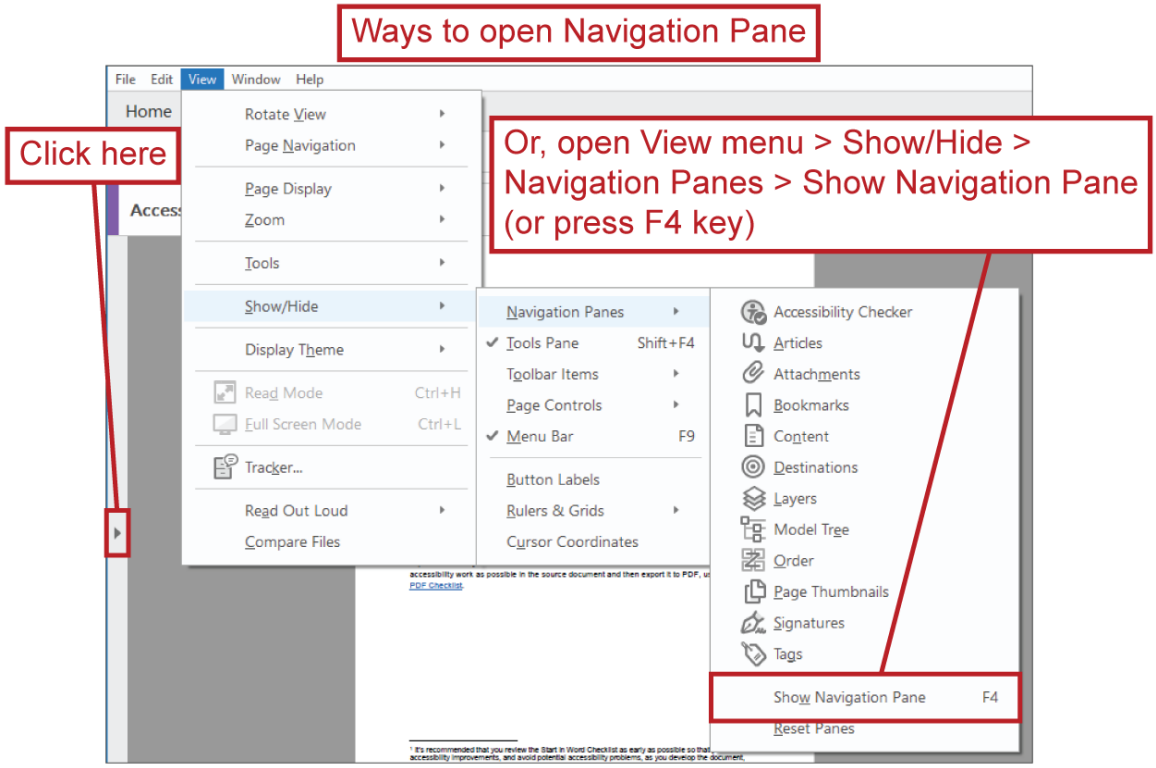


Return to:

- Item #4. Tagged PDF < PDF Remediation Checklist
- Item #5. Logical Reading Order < PDF Remediation Checklist
- Item #20. Reflow Order < PDF Remediation Checklist
- Item #23. Logical Reading Order Re-check < PDF Remediation Checklist

Navigation Pane in Adobe Acrobat Pro

Adobe Acrobat Pro's Navigation Pane includes a number of features (sub-panes) you'll use to check and improve PDF accessibility, including the Accessibility Checker, Content pane, Order pane and Tags pane.



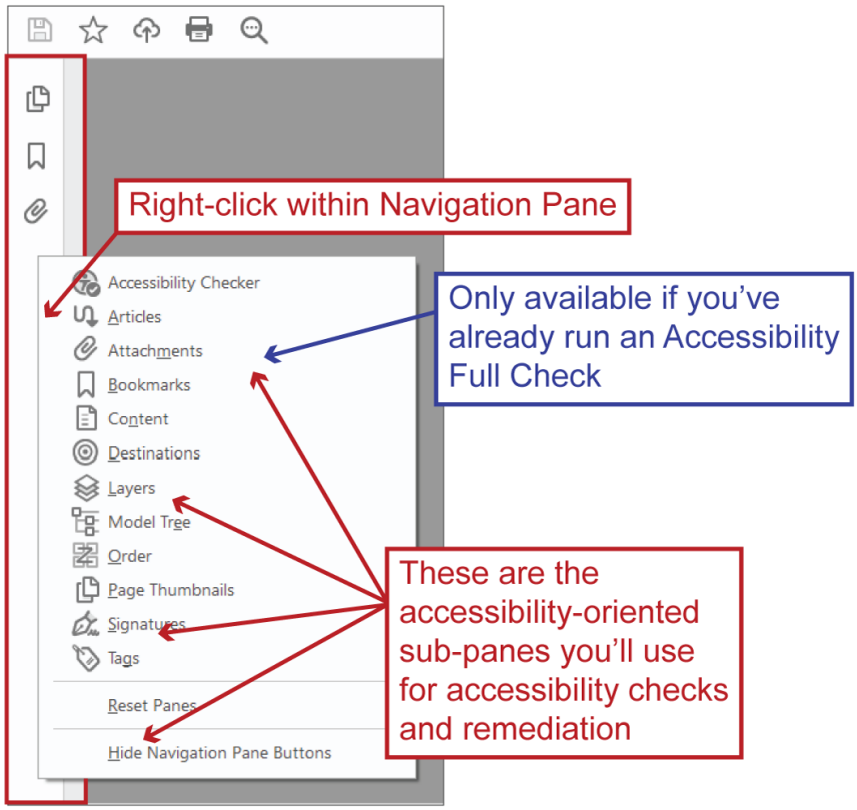
See also:

- Accessibility Tools within Adobe Acrobat Pro

Adding Navigation Pane Features

Right-click within the Navigation Pane — or open the View menu > Show/Hide sub-menu > Navigation Pane sub-menu — to access these accessibility-oriented sub-panes you'll use for accessibility checks and remediation: Accessibility Checker, Content pane, Order pane and Tags pane.

Please note, Accessibility Checker will only be available if you've already run an Accessibility Full Check.



Paragraph

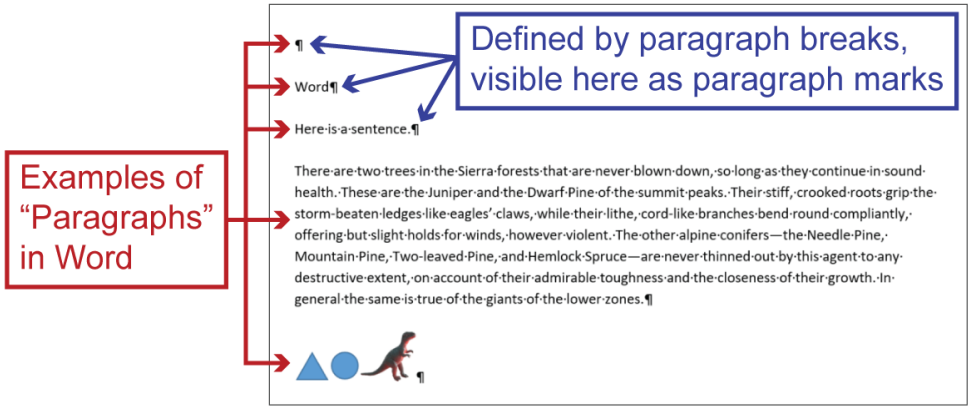
"Paragraph" in Word

In the context of Microsoft Word, a paragraph is a distinct unit of text (or other inline content[49]) that can range in length from being completely empty, to having a single character, a single word, a single sentence or multiple sentences[50].

[49] E.g., inline images, shapes, charts, etc.

[50] I.e., a "paragraph" is not solely a collection of multiple sentences, as it's often colloquially interpreted to be.

Paragraph boundaries — i.e., where one paragraph ends and the next begins — are established through, and defined by, paragraph breaks.



The way in which text is organized into paragraphs within Word affects how the text will be tagged, and subsequently interpreted by assistive technologies, when the document is exported to PDF (see Paragraph Break, a.k.a. Hard Return and Line Break, a.k.a. Soft Return for examples of this). This is because the features used within Word to control how (most[51]) content is tagged when exported to PDF can only be applied to paragraphs in-full; i.e., they cannot be applied to only one portion of a paragraph. However, in Adobe Acrobat Pro, you can manually tag different paragraph portions in different ways.

See also:

- Paragraph Settings

Return to:

- Item #3. Proper Paragraph Spacing < Start in Word Checklist

Paragraph Break, a.k.a. Hard Return

A paragraph break is the point at which one paragraph ends and the next begins.

Paragraph breaks are synonymous with the typographic term "hard return."

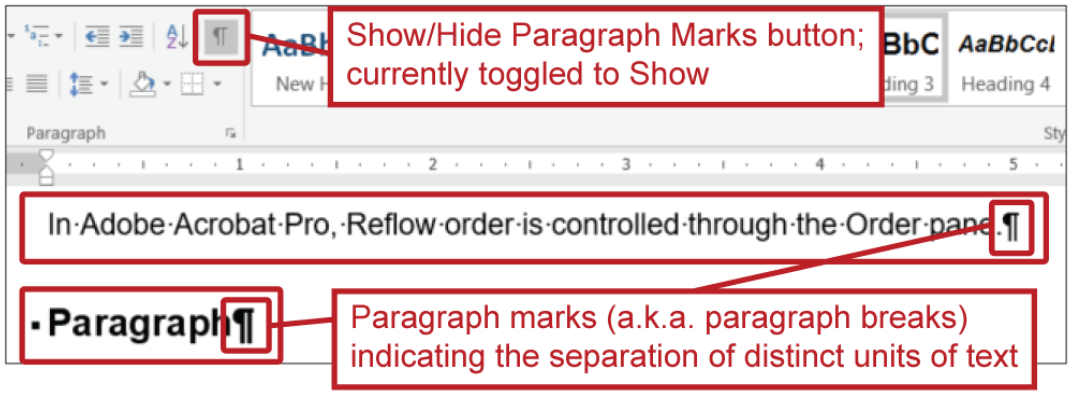
In Word, paragraph breaks (or hard returns) are created by pressing the Enter/Return key and are indicated with paragraph marks.

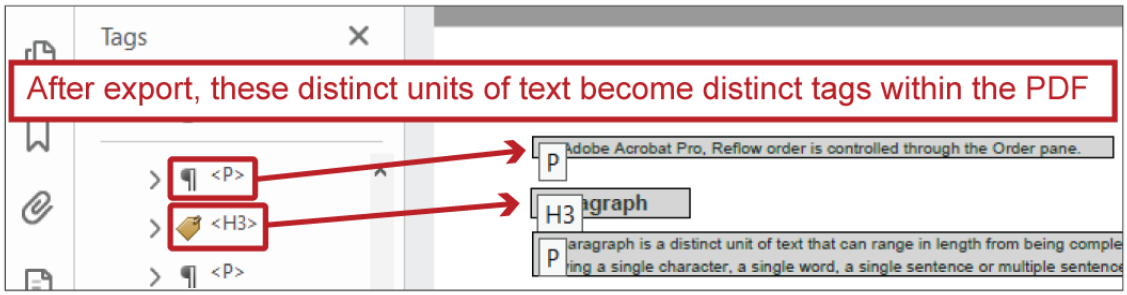
A paragraph's After Paragraph Spacing occurs after its paragraph break.

[51] A notable exception to this is hyperlinks: hyperlink tags will only be assigned to link text and will not be assigned to non-link text that is the same paragraph as link text.

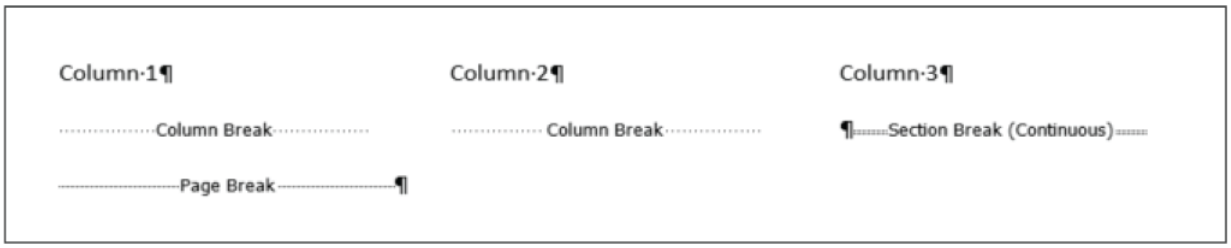
Paragraph Marks

In Word, you can observe how content has been organized into paragraphs using the Show/Hide Paragraph Marks feature. With that feature toggled on (i.e., to Show), you can see paragraph marks — also known as the paragraph breaks — at the end of each paragraph, indicating the separation of those distinct units of text.





With paragraph marks shown, you can also see various Breaks — Pages Breaks, Column Breaks, Sections Breaks, etc. — which you might use to control layout in a more accessible manner.



Return to:

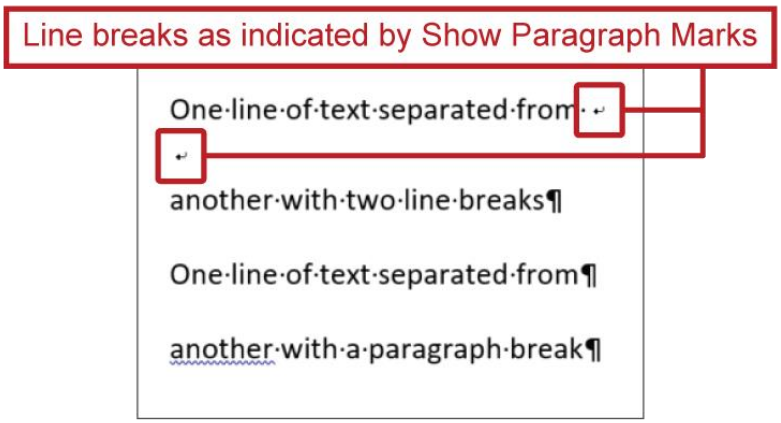
- Item #3. Proper Paragraph Spacing < Start in Word Checklist

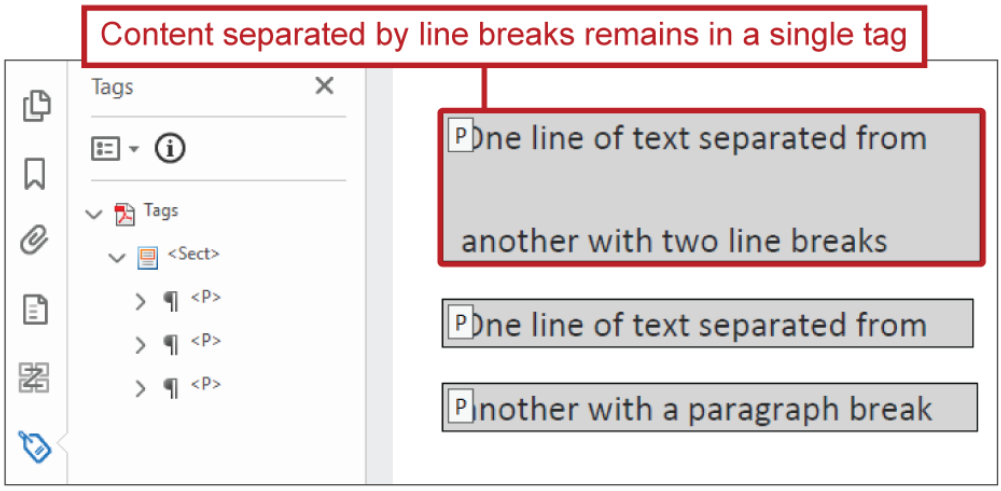
Line Break, a.k.a. Soft Return

Line breaks differ from paragraph breaks in that they push text to the next line without ending or breaking the paragraph. This results in two key differences:

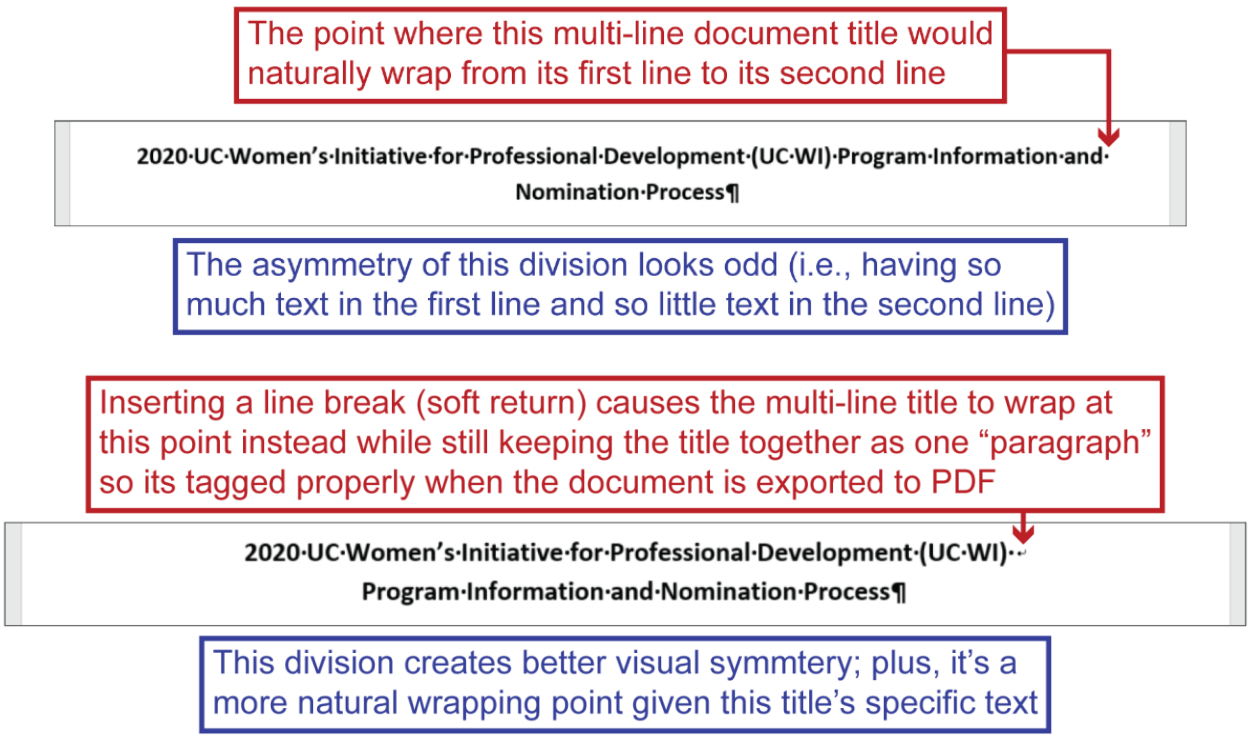
1. After Paragraph Spacing will not occur between two lines of text that are separated by a line break; whereas, it will occur between two lines of text that are separated by a paragraph break

2. Content that is separated by a line break will be wrapped in the same tag; whereas, content that is separated by a paragraph break will be wrapped in separate tags, as seen in the screen shots below, along with what line breaks look like when Show Paragraph Marks is toggled on





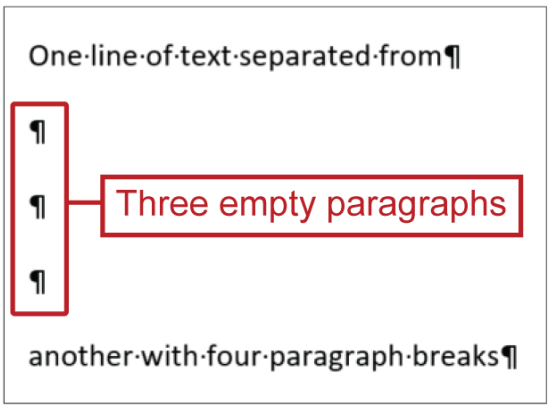
Line breaks are useful for controlling the specific point at which a multi-line title/headings wrap from one line to the next. For example:



In Word, line breaks (or soft returns) are created by pressing the Shift and Enter/Return keys together.

Empty Paragraph

An empty paragraph is just that — a paragraph with no content in it.



It is, unfortunately, a common practice to use empty paragraphs to create vertical space between content (e.g., in previous screen shot, three empty paragraphs are used to create vertical space between two lines of text), but this should, in fact, not be done; it creates problems for assistive technologies, many of which will recognize the empty paragraphs and read them as “blank.” This allows for at least three potential issues to arise:

1. Other issues can cause assistive technologies to read “blank” — such as actual content that can be seen visually but has been programmed improperly so it reads as “blank” — which means that when assistive technology users encounter “blank,” they can’t be fully certain if they’re in fact encountering an empty paragraph or if there’s something else going on. And why not spare them of that uncertainty if you can?

2. Frequently, multiple empty paragraphs are used in sequence to create larger amounts of vertical space, which means that an assistive technology user will have to hear “blank” multiple times in a row. Imagine how annoying it would be if you had to hear “blank” many times between each bit of actual content; it’d get old quick, wouldn’t it?

3. Sometimes empty paragraphs will unknowingly be assigned a Heading Style (i.e., tagged as headings), so they’ll also appear as “blanks” within the heading hierarchy, causing additional confusion.

Use Paragraph Spacing instead of empty paragraphs to create vertical space between content, or if the goal is to push the next line of content to the next page, consider using a Page Break instead.

Return to:

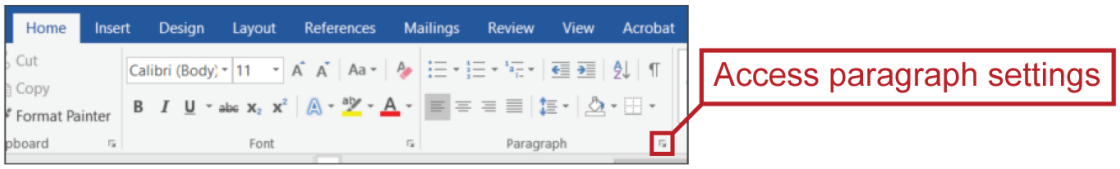
- Item #3. Proper Paragraph Spacing < Start in Word Checklist

“Paragraph” in Adobe Acrobat Pro

In the context of Adobe Acrobat Pro, “paragraph” most often refers to a specific type of text — body or “normal” text — and how that type of text should be tagged — with a paragraph tag.

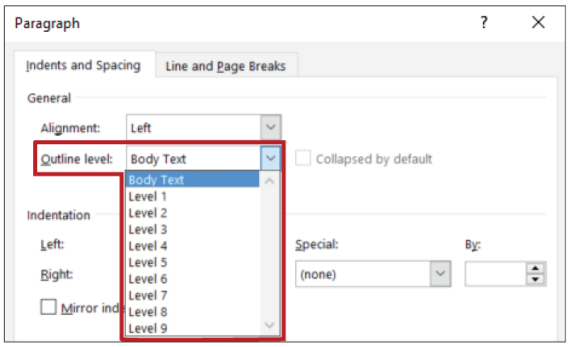
Paragraph Settings

Paragraph Settings allow you to control Outline level, Indentation, Before/After Paragraph Spacing and Line spacing.



Outline Level

Outline level is controlled through the Paragraph Settings and affects how text segments are tagged when a Word document is exported to PDF.



Body Text = paragraph tag

Level # = Heading # tag: e.g.,
Level 1 = Heading 1 tag;
Level 2 = Heading 2 tag; etc.

However, it's important to note that Outline level will not affect how text is read within Word: i.e., if you assign text the Level 1 Outline level, it will not be read as a Heading 1 within Word (though it will be read as a Heading 1 if the document is exported to PDF).

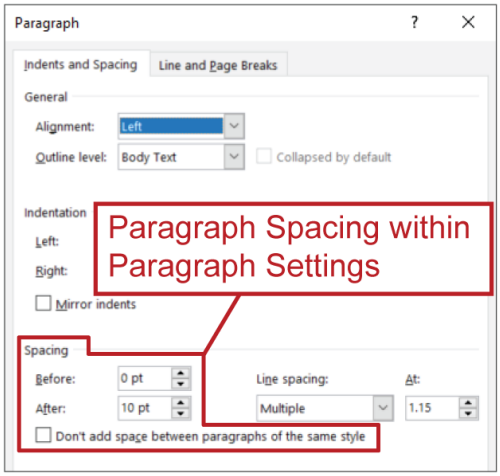
Return to:

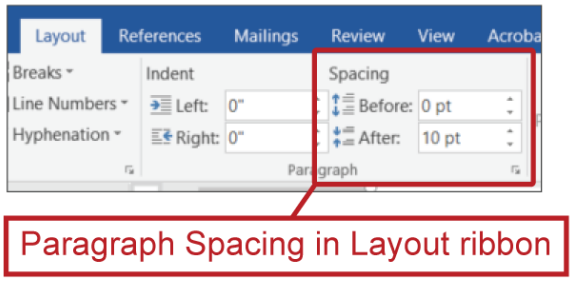
- Item #1b. Tagged as Headings < Start in Word Checklist
- Item #1d. Proper Heading Hierarchy < Start in Word Checklist
- Item #2. Body Text < Start in Word Checklist

Paragraph Spacing

Paragraph Spacing is a setting within Word that allows you to manipulate the amount of vertical space between paragraphs. It is the most accessible way of creating the desired amount of vertical space between lines of content and should be used instead of empty paragraphs.

Paragraph Spacing can be controlled through the Paragraph Settings panel or through the Paragraph Spacing pane within the Layout ribbon.



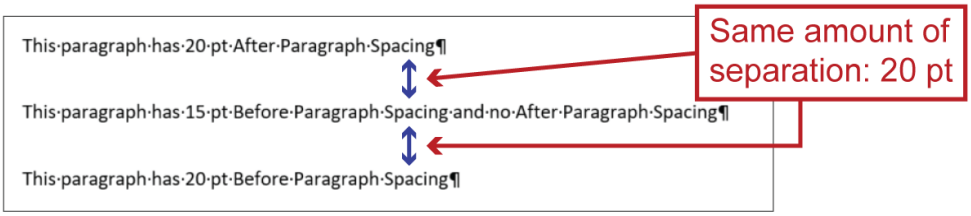


Paragraph spacing should not be confused with Line Spacing, which controls the amount of space between lines of text within a paragraph and is also found in the Paragraph Settings.

Before Paragraph Spacing adds vertical space before (i.e., above) a paragraph.

After Paragraph Spacing adds vertical space after (i.e., below) a paragraph.

Before Paragraph Spacing and After Paragraph spacing are not additive: i.e., if a paragraph has after paragraph spacing and the next paragraph has before paragraph spacing, those values will not combine together to dictate the amount of separation between the two paragraphs; rather, the larger of the two values will, on its own, dictate the amount of separation.



Follow these Line and Paragraph Spacing recommendations for more readable body/Normal text[52]:

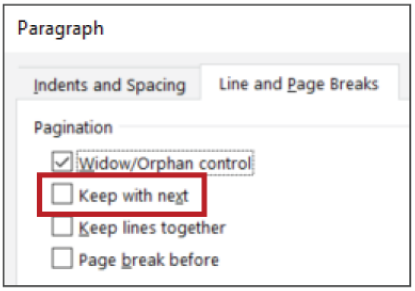
- Line Spacing: Multiple at any value between 1.15 (which is the default value in many versions of Microsoft Word) and 1.5
- After Paragraph Spacing: Any value between 10 pt (which is the default value in many versions of Microsoft Word) and “2x the font size” (i.e., double the font size)

Return to:

- Item #3. Proper Paragraph Spacing < Start in Word Checklist

Keep with Next

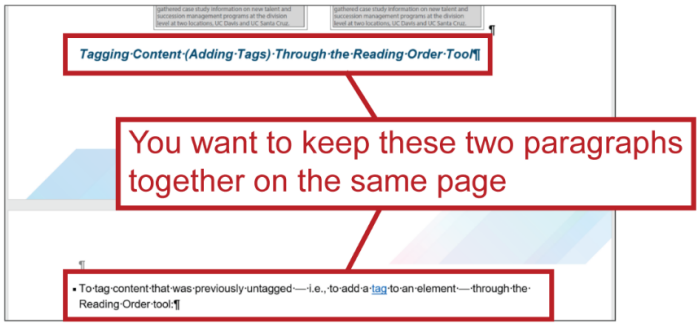
Keep with next is another paragraph setting within Microsoft Word that can be used to control layout in a more accessible manner. It can be found within the Paragraphs Settings panel’s Line and Page Breaks tab.



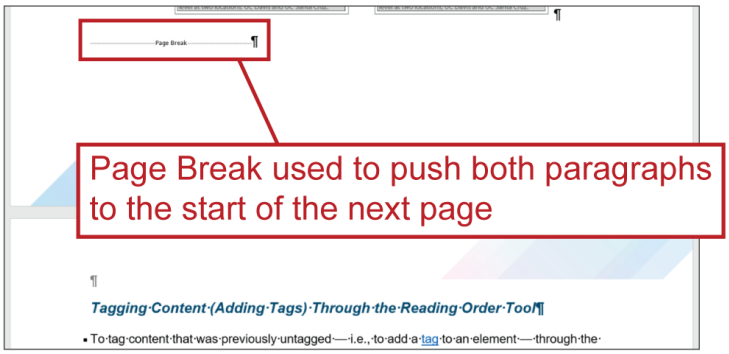
[52] You may see that WCAG 2.1 Success Criterion 1.4.12 dictates line spacing of at least 1.5x the font size and after paragraph spacing of at least 2x the font size, but it’s important to note two things in this regard: 1) this Success Criterion specifically applies to “content implemented using markup languages” (e.g., HTML) which means it does not apply to the Word or PDF formats (content is not implemented in those formats using markup languages); 2) UC has not adopted WCAG 2.1 (UC has only adopted WCAG 2.0).

If this setting is applied to a paragraph, Word will keep that paragraph and the next paragraph together on the same page. The practical application of this is that you can ensure multiple paragraphs are displayed together on the same page without having to use a Page Break.

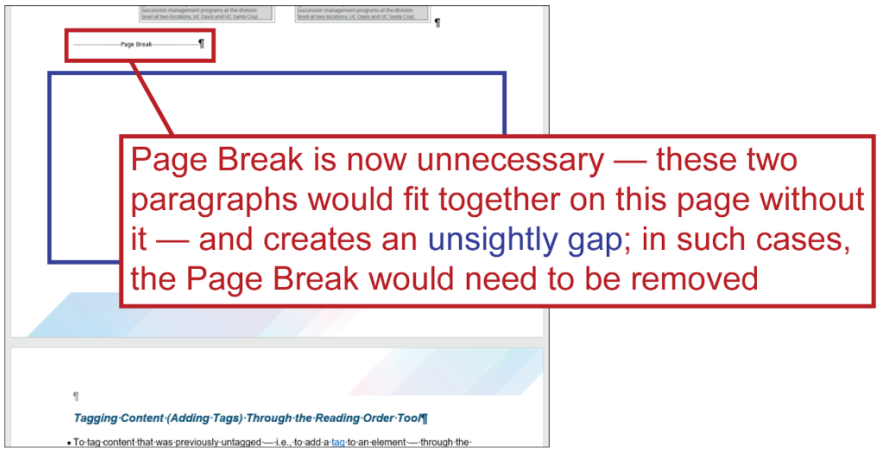
How is this helpful? Imagine you have two paragraphs you want to keep together on the same page, but due to the natural sequence of content in the document, one of those paragraphs is at the end of one page while the other paragraph is at the beginning of the next page.



You could add a Page Break before the first paragraph, which would push both paragraphs to the start of the next page and keep them together that way, but this comes with a risk…



If you were to add or remove content before that Page Break, it might then no longer be necessary in order to keep the two paragraphs together, and instead could create an unsightly gap between pages and need to be removed.



By using Keep with next instead, you can keep the two paragraphs together on the same page without the risk of other changes unintentionally altering the layout around those paragraphs.

Return to:

- Item #3. Proper Paragraph Spacing < Start in Word Checklist

Reading Order Tool

The Reading Order tool/panel is one of Adobe Acrobat Pro's Accessibility tools. Much like the Tags pane, it provides a means of viewing, adding and editing tags, but there are important differences between the two features you'll need to understand:

1. The tags and tag order contained within the Tags pane are what assistive technologies read when they encounter a PDF
    a. I.e., the Tags pane provides a reliably accurate indication of what assistive technologies will read and the order in which they'll read it
2. The Reading Order tool is intended to provide an alternate means for viewing and editing the tags that are in the Tags pane
    a. Think of it as a user interface that's intended to control something else
3. The Reading Order tool does not show tag order (i.e., the order in which tags/content will be read by assistive technologies)
    a. What the Reading Order tool calls "Page content order" is actually the Reflow order
    b. The Tags pane provides the only means for viewing and/or editing tag order
4. The Reading Order tool does not always work reliably or properly
    a. Sometimes the Reading Order tool shows you that content is tagged one way but the Tags pane shows you that the same content is tagged another way
        i. In such cases, ignore what the Reading Order tool is showing you
        ii. And in general, do not rely solely upon the Reading Order tool to show you how content is tagged; use the Tags pane instead of, or in addition to, the Reading Order tool
    b. Sometimes attempts to add or edit tags using the Reading Order tool do not work as intended (i.e., changes made through the Reading Order tool are not reflected in the Tags pane)
        i. In such cases, you will have to use the Tags pane to add or edit tags

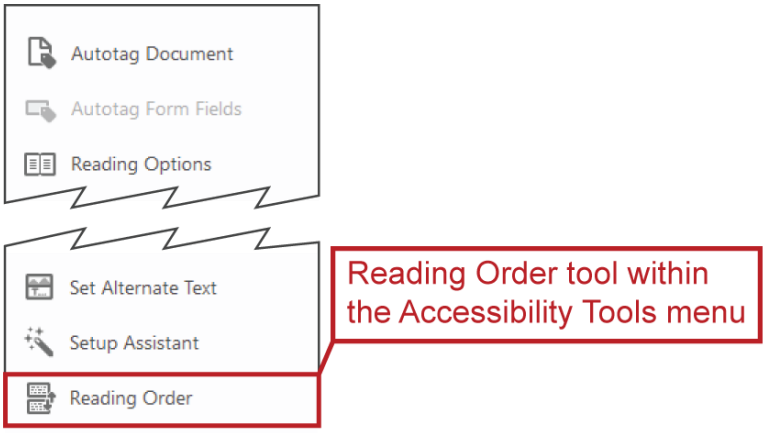
5. But if the Reading Order tool is working properly[53], it provides (arguably) superior means of doing certain things, such as tagging content
    a. If you need to tag content, it's recommended you first try using the Reading Order tool and as soon as possible, check the Tags pane to ensure the Reading Order tool worked properly: if it did, keep using it in that PDF; if it didn't, switch over to using the Tags pane to tag content (see also: Create Tag From Selection)

Viewing Tags Through the Reading Order Tool

Disclaimer: the Reading Order tool does not always provide an accurate view of tags (see previous section, Reading Order Tool, to learn more about this)

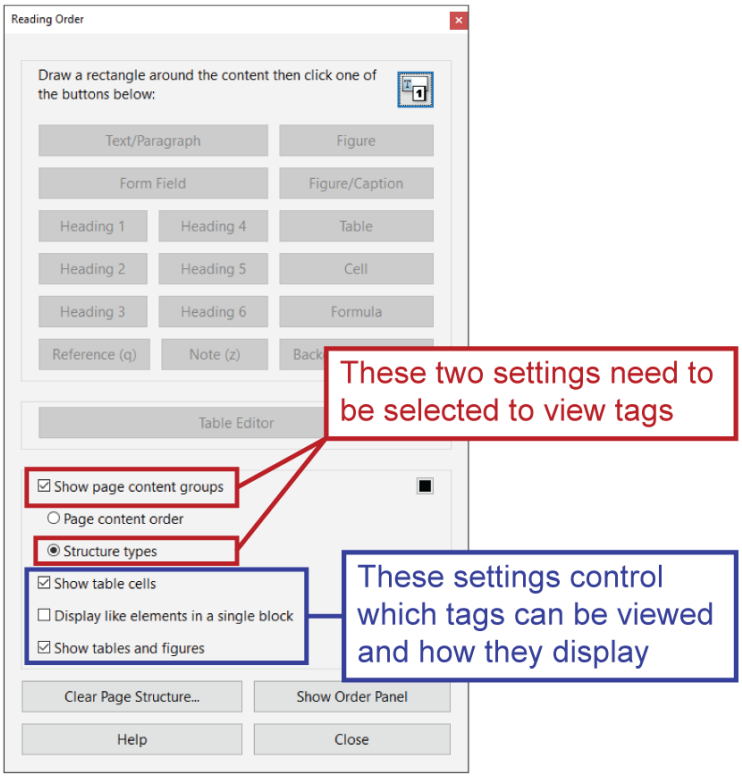
To view tags through the Reading Order tool:

1. Open the tool by selecting it from the Accessibility tools menu

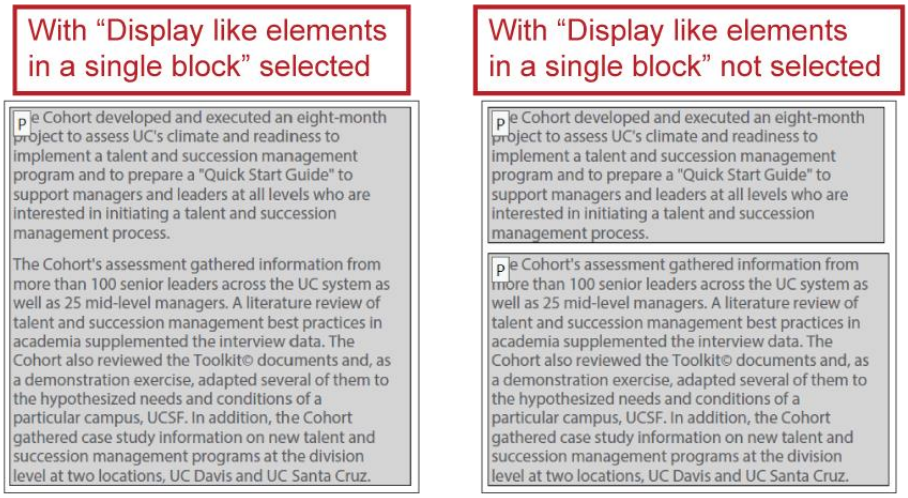


[53] I.e., if changes made through it are accurately reflected in the Tags pane

2. Ensure the Show page content groups and Structure types settings are selected



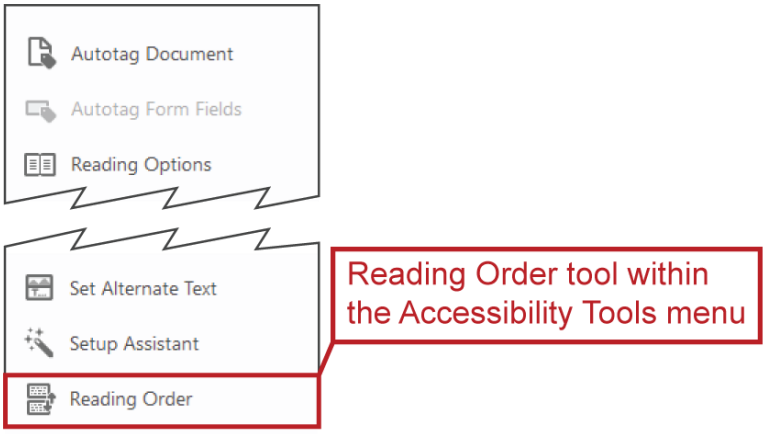
a. Display like elements in a single block: if selected, consecutive tags of the same type will display in a single block as opposed to individual blocks for each tag



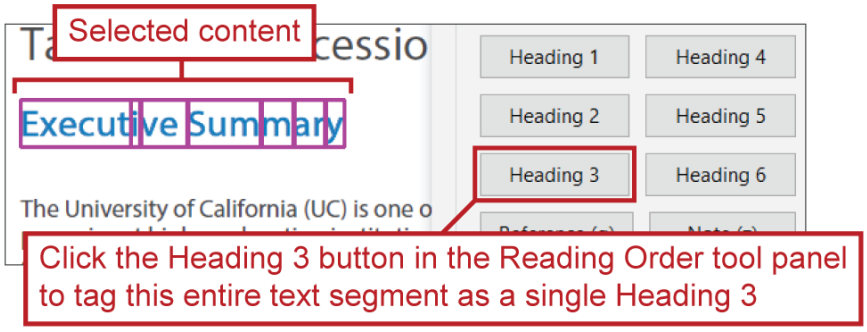
Tagging Content (Adding Tags) Through the Reading Order Tool

To tag content that was previously untagged — i.e., to add a tag to an element — through the Reading Order tool:

1. Open the tool by selecting it from the Accessibility tools menu



2. With your mouse cursor, draw a selection rectangle around the content you want to tag[54]
    a. If necessary, you can hold down the Shift key and draw out another selection rectangle to add more contents to your current selection; or, you can hold down the Ctrl (PC) / Cmd (Mac) key and draw out another selection rectangle to remove contents from your current selection
3. Once you've selected the exact contents you want to tag, click the button in the Reading Order tool panel that corresponds with the specific tag structure type you want to apply: e.g., if you want to tag selected content as a Heading 3, click the Heading 3 button

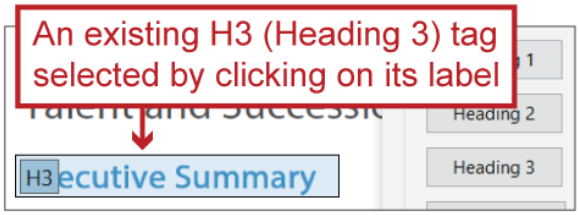


[54] In order to select content, you must draw the selection rectangle around the content's entire bounding box; however, bounding boxes can be unpredictably sized/shaped, so in some cases, you may need to try multiple times before you find and select content's entire bounding box. And, as you can see in the screen shot associated with bullet point #3, some words/sentences/text segments are comprised of multiple bounding boxes.

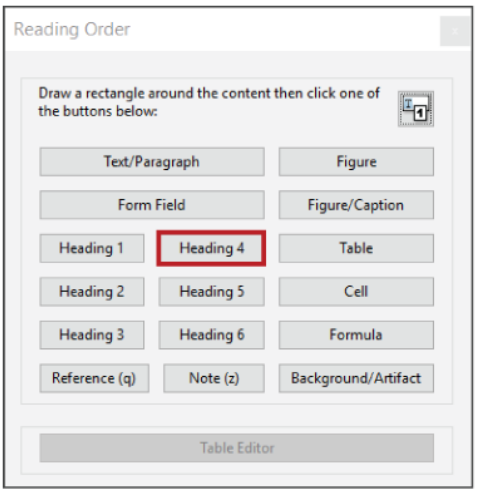
Editing Tag Structure Type Through the Reading Order Tool

You can edit a tag's structure type through the Reading Order tool:

1. Select a tag by:
    a. Clicking on an existing tag's label



    b. With your mouse cursor, draw a selection rectangle around the tag's contents (you can even add new content to the existing tag as part of this process by drawing a selection rectangle that includes both the existing tag's contents and the new content)
2. Click the button in the Reading Order tool panel that corresponds with the specific tag structure type you want to apply
    a. For example, if you wanted to tag the content as a Heading 4, you'd click the Heading 4 button

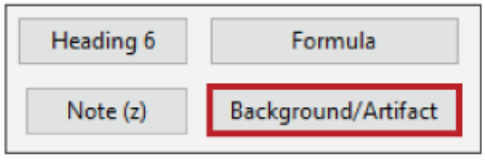


Return to:

- Item #18. Appropriate Nesting < PDF Remediation Checklist

Tag Content as Artifact ("Artifacting") Through the Reading Order Tool

You can tag content as an artifact through the Reading Order tool by selecting it and clicking the Background/Artifact button.



The differences with this method (compared to Change Tag to Artifact Through the Tags Pane) are that you cannot set the artifact type[55] but it does delete the container tag for you.

[55] Which some would consider a non-essential step

Recognize Text

Assistive technologies cannot interpret text within images, and unfortunately, many scanners convert physical documents to PDF by capturing images of the document and compiling those images into a PDF, which assistive technology users wouldn't be able to read[56].

Recognize Text is a feature within Adobe Acrobat Pro that recognizes text within images (and scanned documents such as those just described) so that the text can be interpreted by assistive technologies[57]. It's a powerful tool, but it can occasionally misinterpret characters and words, especially if processing a low resolution or poorly-scanned image, so it's always worth checking if you can obtain a version of a document that can be interpreted by assistive technologies and won't require Recognize Text.

See also:

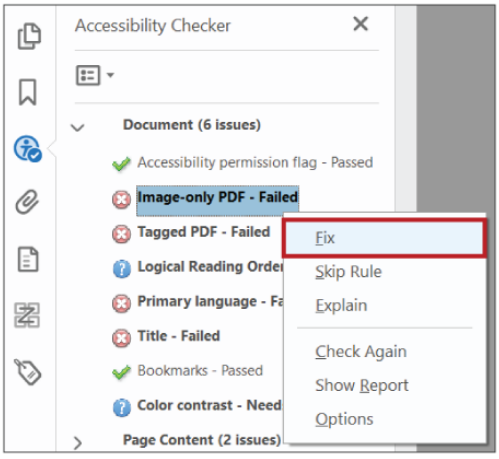
- Running Recognize Text

Return to:

- Item #3. Image-only PDF < PDF Remediation Checklist

Running Recognize Text

If you are needing to run recognize text because the Accessibility Checker rule Image-only PDF was marked as Failed, the easiest way to initiate the process is to right-click on the Image-only PDF rule within the Accessibility Checker and select Fix.



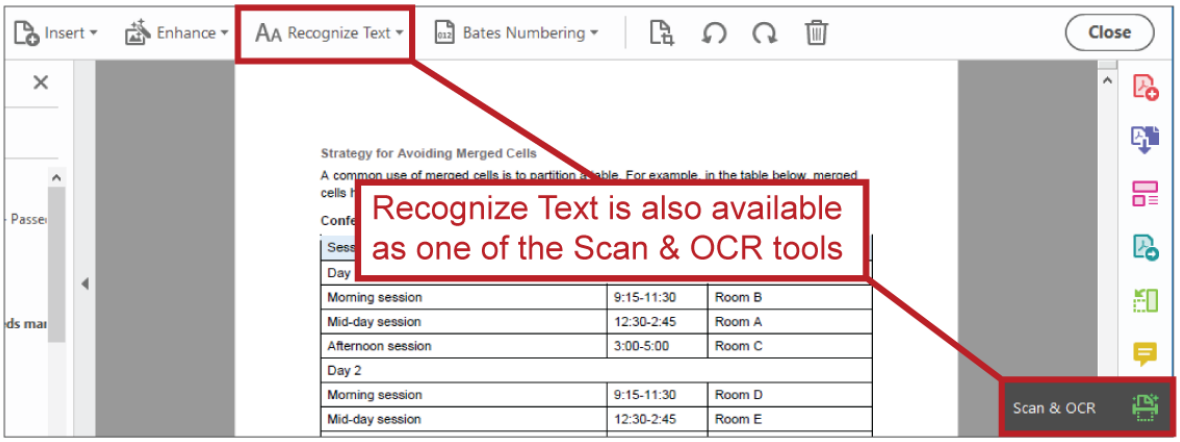
[56] Thankfully, many modern scanners can be programmed to automatically run Optical Character Recognition (OCR) when converting a physical document to PDF; OCR will recognize text and add it to the PDF in a way that can be interpreted by assistive technologies.

[57] Recognize Text is a form of Optical Character Recognition (OCR).

A Recognize Text – General Settings panel will appear. Make sure the language setting is correct and choose either:

a) Search Image, along with a high Downsample To setting (e.g., 600 dpi), or…
b) Searchable Image (Exact)[58]

You can also access and run Recognize Text through the Scan & OCR tool menu.



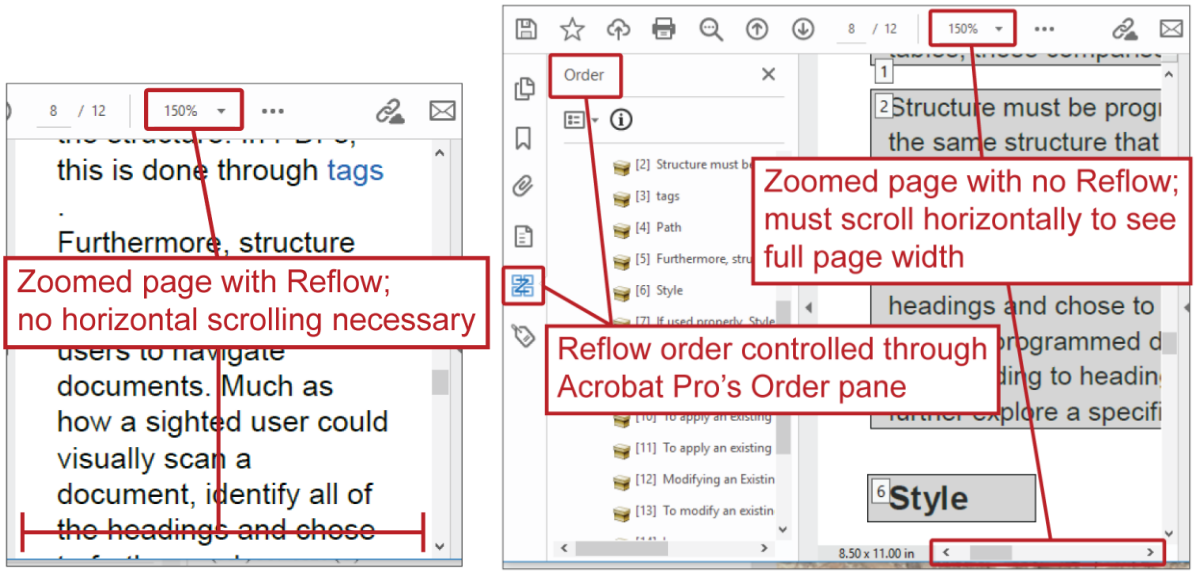
Return to:

- Item #3. Image-only PDF < PDF Remediation Checklist

[58] Searchable Image (Exact) will better preserve fine detail.

Reflow and Reflow Order

Reflow is a setting within Adobe Acrobat that allows you to zoom into a PDF page, so text is easier to read, while “reflowing” the amount of words/characters in each line of text so you don’t have to use the horizontal scroll bars to see each page’s full contents, which in turn makes the PDF easier to read.



Reflow order is controlled through Adobe Acrobat Pro’s Order pane.

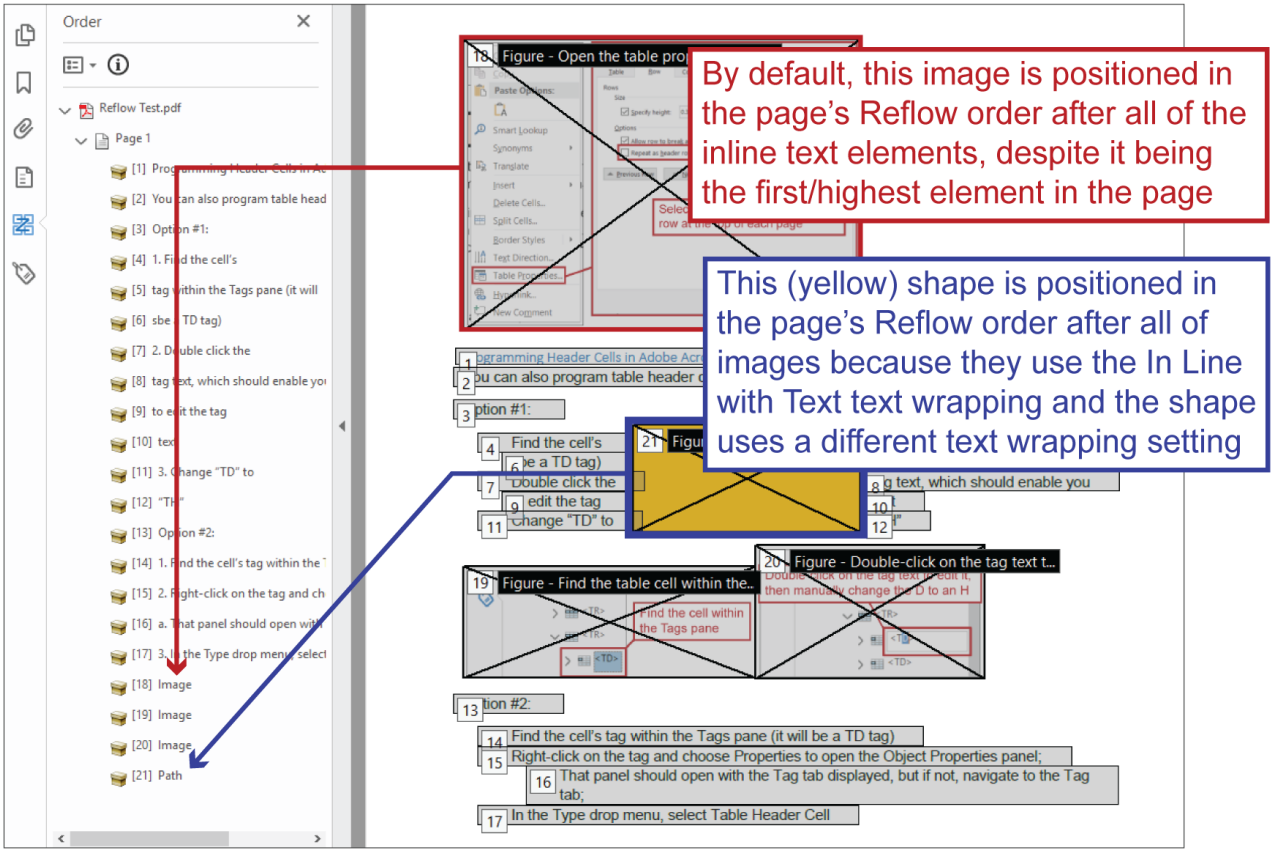
Return to:

- Item #20. Reflow Order < PDF Remediation Checklist

Default Reflow Order when Exporting from Word to PDF

An element’s default position within a page’s Reflow order depends first on what type of element it is:

1. Inline text elements will be ordered before…
2. Inline non-text elements (e.g., images that have In Line with Text text wrapping, Tables, etc.), which will be ordered before…
3. Non-inline elements (e.g., text boxes added through the Insert ribbon or images/shapes that have a text wrapping setting other than In Line with Text)



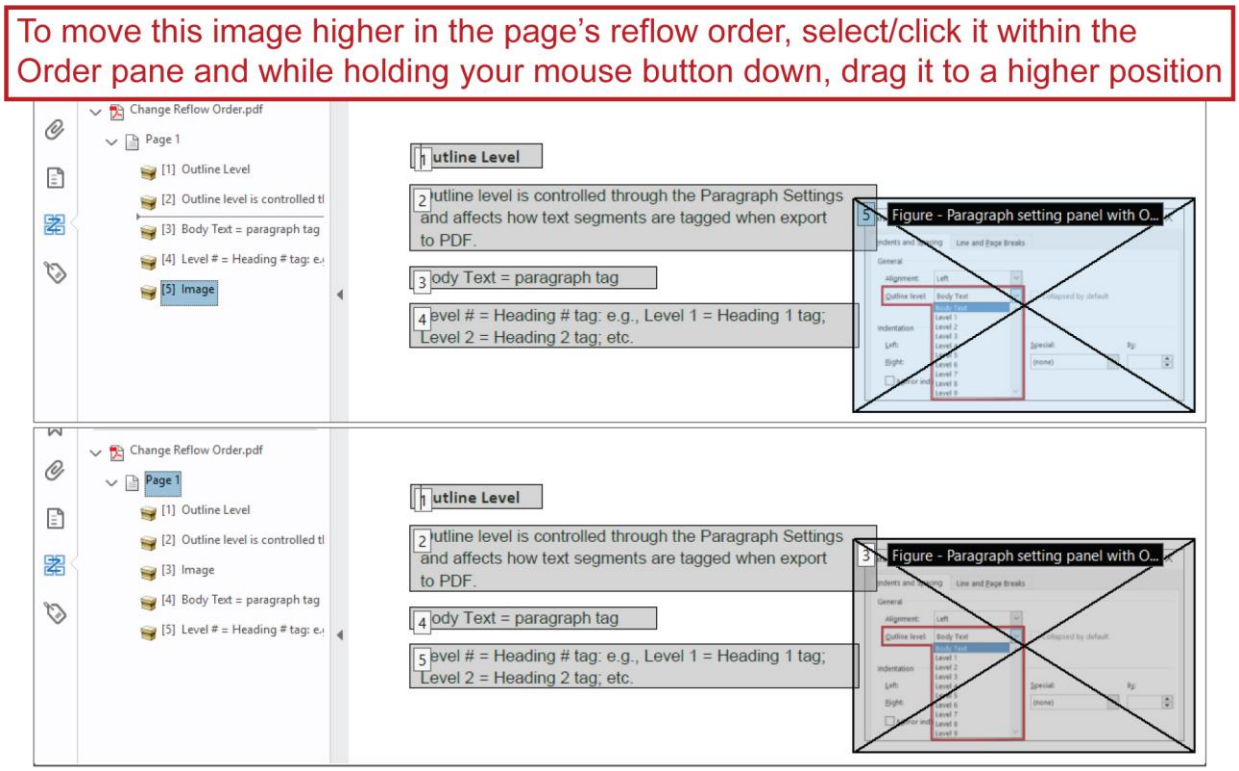
If there are multiple elements of the same type on the page (e.g. multiple inline non-text elements), their relative order depends on their relative position:

- For inline elements…
  - Elements positioned higher on the page will be ordered before elements positioned lower on the page
  - If multiple inline elements are on the same line within a page, elements to the left will be ordered before elements to the right
- For non-inline elements…
  - Elements positioned higher on the page will be ordered before elements positioned lower on the page

Order Pane: Adjusting Reflow Order within Adobe Acrobat Pro

In Adobe Acrobat Pro, Reflow order is controlled through the Order pane and can be edited by dragging entries up and down within the Order pane.

Note: elements may seem to disappear when you change their Reflow order, but rest assured, they aren't gone for good; typically, what has happened is that the element was inadvertently moved behind another element that is now visually blocking it, and all you need to do to correct this is change the Content order.



Return to:

- Item #20. Reflow Order < PDF Remediation Checklist

Remediate (verb) and Remediation (noun)

In the context of accessibility, "remediation" refers to the act of making something more accessible; to "remediate" something is to make it more accessible. These terms are often used, specifically, to describe making accessibility improvements to a PDF through Adobe Acrobat Pro, but they can be used to describe making accessibility improvements in a source file as well.

See also:

- Tag or Tagging (verb)
    - Manually Adding and Editing Tags

Return to:

- Item #7e. Merged Cells < Start in Word Checklist

Structure

Structure refers to three interrelated concepts:

1. How content is organized and presented within a document
2. The additional context and meaning that is uniquely conveyed through that organization and presentation
3. Additional navigation and reading options provided by certain structure types.

For example…

Headings contribute to structure — they indicate how content has been organized in sections and subsections, and communicate the hierarchical relationships between those sections and subsections; without headings, that organization and those hierarchies might not exist or be understood by readers.

Lists contribute to structure — they communicate specific relationships between list items; without lists, those relationships wouldn't be as clear.

Tables contribute to structure — they facilitate comparisons of various data points; without tables, those comparisons wouldn't be as easy to make.

Headings, lists and tables are all "structure types" — i.e., types of structures; so are links and paragraph text. Many assistive technologies provide means of navigating and reading content by structure type. For example, most screen readers have a command that will jump the user directly to the next link (i.e., the first link that comes after whatever the screen reader last read); or, much as how a sighted user could visually scan a document, identify all of its headings and chose to further explore a specific section based on its heading, in a document whose structure has been properly programmed, an assistive technology user can scan the document by jumping from heading to heading, or by opening a list of all of the headings in the document, and choose to further explore a specific section based on its heading.

Structure must be programmed in a way that allows assistive technology users to experience, and benefit from, the same structure that is seen visually. In PDFs, this is done through tags.

This screen reader demonstration video will help you get a sense of how screen readers read properly programmed content and use structure to provide more navigation and reading options.

Return to:

- Item #4. Tagged PDF < PDF Remediation Checklist

Styles

If used properly, Styles are one of the most powerful and efficiency-increasing features within Microsoft Word. They allow you to automatically apply pre-defined formatting rules to text segments by assigning them a Style and to automatically change the formatting rules of all text segments that have already been assigned a particular Style.

Styles can be used to program how certain paragraphs[59] are tagged when exported to PDF. This is managed through the Outline level property, which is pre-assigned to built-in Styles and can be manually assigned, or re-assigned, for any Style, including new Styles you create. For example, the built-in Heading 3 Style is pre-assigned the Level 3 Outline level, so text segments that have been assigned the Heading 3 Style will be given a Heading 3 tag when exported to PDF.

However, it's important to note that only the built-in Heading # Styles will affect how text segments are structurally interpreted within Word by assistive technologies. For example, a paragraph assigned the built-in Heading 1 style will be interpreted within Word by assistive technologies as a Heading 1, but a paragraph that is, in a different way[60], assigned the corresponding Outline level (Level 1) will likely not be recognized within Word by assistive technologies as a Heading 1[61].

Styles can only be applied to full paragraphs; you cannot apply different Styles to different parts of a paragraph. However, once a paragraph has been exported to PDF, you can manually tag different parts of a paragraph in different ways.

Return to:

- Item #1b. Tagged as Headings < Start in Word Checklist
- Item #2. Body Text < Start in Word Checklist

[59] "Paragraph," as used throughout this section and its sub-sections, refers to the Microsoft Word-specific meaning of "paragraph": a distinct unit of text, as defined by paragraph breaks.

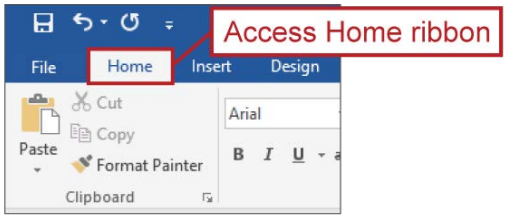
[60] Such as through Paragraph settings, independent of an assigned Style, or through the assignment of a different Style that also has the Level 1 Outline level.

[61] Assistive technologies will likely interpret such text segments as Normal text/body text.

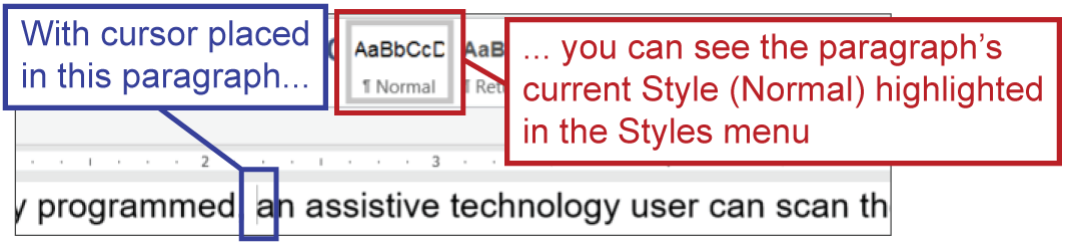
Identifying a Paragraph's Current Style

To identify which Style is currently applied to a paragraph:

1. Open Word's Home ribbon



2. Place your cursor anywhere within the paragraph in question and note which Style is highlighted within the Home ribbon's Styles menu



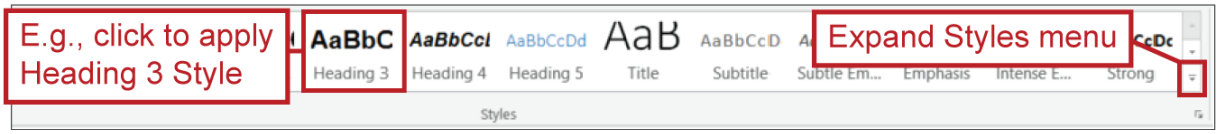
Return to:

- Item #2. Body Text < Start in Word Checklist

Applying an Existing Style

To apply an existing Style to new text, select the desired Style from the Style menu, then type your text.

To apply an existing Style to existing text, highlight or place your cursor within the paragraph to which you want to apply the Style, then select the desired Style from the Style menu in the Home ribbon.



Styles can only be applied to full paragraphs; you cannot apply different Styles to different parts of a paragraph.

Return to:

- Item #1d. Proper Heading Hierarchy < Start in Word Checklist
- Item #2. Body Text < Start in Word Checklist

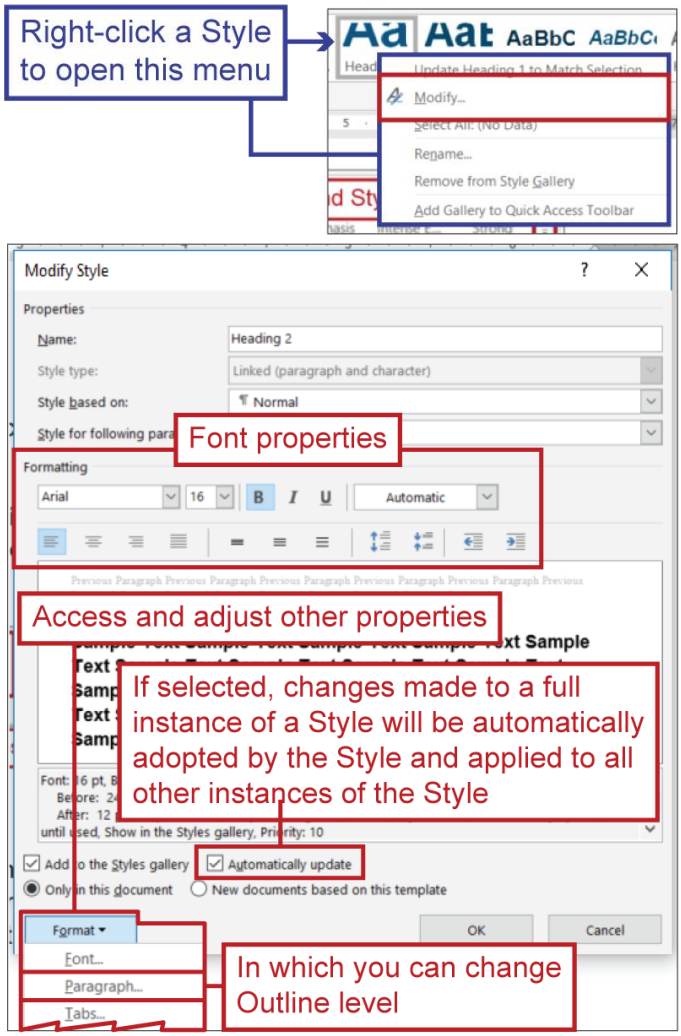
Modifying an Existing Style

Modifying an existing Style causes those changes to be automatically applied to all existing instances of that Style — i.e., all paragraphs to which that Style has already been applied[62].

To modify an existing Style:

1. Right-click the Style within the Styles menu and select the Modify option

2. This will open the Modify Style panel; within that panel you can adjust various Style properties, including the font properties, and use the Format drop menu to access and adjust further properties, such as the Paragraph Settings where you could change the Outline level
   - If a Style's Automatically Update setting is checked, then changes made to an entire, full-paragraph[63] instance of that Style will be automatically adopted by the Style itself as well as all other instances of that Style[64]
   - If you do need to give particular instances of a Style unique rules[65], make sure to unselect (i.e., uncheck) the Style's Automatically Update setting



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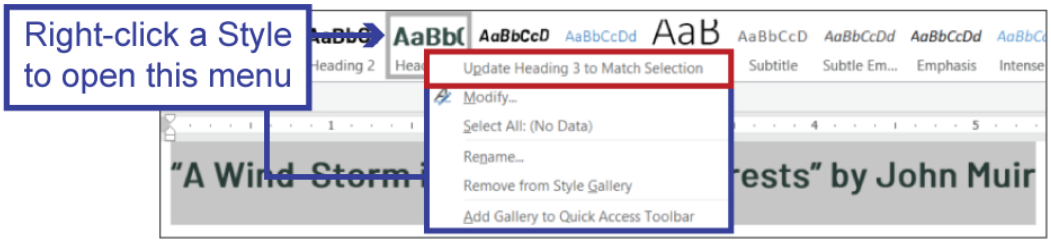
[62] For example, if you modify the Heading 2 style, changing the font color, all existing instances of the Heading 2 Style within that document — i.e., all other paragraphs to which the Heading 2 Style has been applied — will automatically adopt the new font color.

[63] I.e., if every single character within the paragraph is selected; if even a single character is left out of the selection, this automatic update will not occur.

[64] For example, let's say: a) the built-in Heading 3 Style has been applied to a particular paragraph; and b) the Heading 3 Style's Automatically Update setting is checked (which it typically is, by default). If that entire paragraph is selected and given a different font size, then the Heading 3 Style, as well as all other paragraphs to which the Heading 3 Style has been applied, will automatically adopt the new font size.

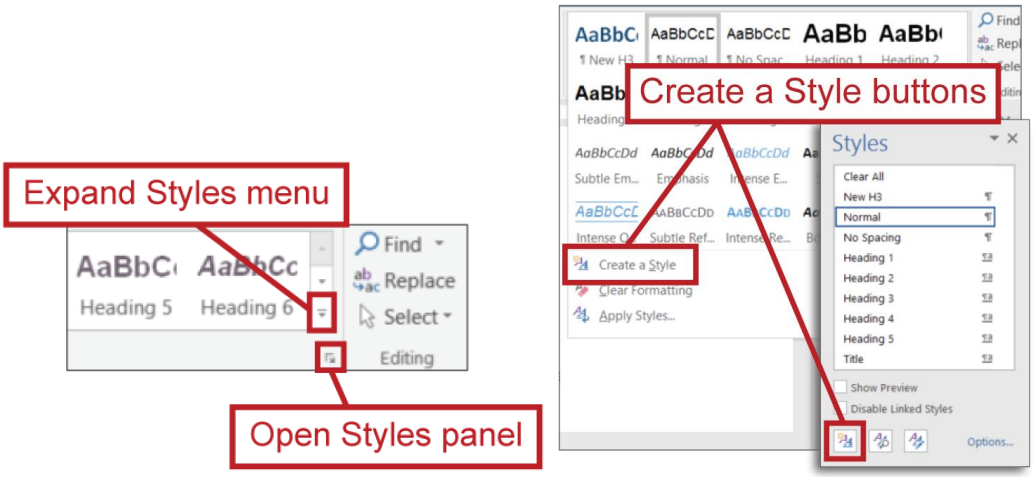
[65] For example, Style instances that follow tables likely need their own unique Before Paragraph Spacing because After Paragraph Spacing cannot be applied to tables.

You can also modify an existing Style by highlighting a text segment, then using the Update *Style Name* To Match Selection feature, which can also be accessed by right-clicking on a Style within the Styles menu. This will automatically apply many of the highlighted text segment's formatting properties to the Style, including most font and paragraph properties, but it won't affect the Style's Outline level. Again, these formatting changes will be automatically applied to all instances of that Style.



Create a New Style

The Create a New Style button is available within the Styles menu (when it's expanded) and the Styles panel. Clicking this button will open the Create New Style from Formatting panel, which mirrors the Modify Style panel.



Tables

Tabular Data

Tabular data is information (i.e., individual data points) whose relational attributes allow for it to be logically arranged in rows and/or columns in order to facilitate connections and/or comparisons. For example…

In the table below, each table cell (i.e., each data point) shares a relation with the other cells in its column — they're all types of food or particular nutritional values — and with the other cells in its row — they all pertain to a particular type of food. Presenting this information through a table facilitates connections across each row — you can see the nutritional values connected to each type of food — and comparisons across each column — you can see how the foods' nutritional values compare.

Food	Fat	Sugar	Protein
Apple	0.2g	10g	0.3g
Carrot	0.2g	4.7g	0.9g
Avocado	15g	0.3g	2g

Tabular data can take many forms: it is not exclusively numbers or scientific data; it could be words, names, email addresses, images, a combination therein, whatever; the key characteristic is, again, simply that comparisons/connections will be facilitated by arranging the data points in columns and rows.

Tables should only be used for the purpose of presenting tabular data; they should not be used for layout purposes.

Return to:

- Item #7a. Tabular Data < Start in Word Checklist

Table for Layout Purposes

Tables should not be used for layout purposes:

- It implies relationships that may not exist or be meaningful, which can inhibit an assistive technology user's understanding of the material
- It can create navigation difficulties for assistive technology users

Using a table for layout purposes refers to arranging content in a table for the purpose of achieving a certain visual design rather than for the purpose of facilitating comparisons and/or connections of specific data points in each row and/or column. That is, if the only thing enhanced by using table formatting is the visual design — not the ability to compare data or express connections — then you're using a table for layout purposes (which you shouldn't do).

For example, the table below is being used to achieve a newspaper-like visual design, not to facilitate comparisons between cells or connections across each row/column. This is evident by the fact that: a) while there are relations across each row — each row's cells relate to the same article — there are not relations across each column — e.g., there isn't a column dedicated to the articles' images, a column dedicated to articles' titles and bylines, etc.; and b) if the table formatting was removed — if these two articles were just sequenced linearly on a page — the only thing lost, really, would be the newspaper-like visual design; one's understanding of the contents wouldn't be significantly affected because the table layout wasn't facilitating comparisons or connections.

<table>
<tr><th colspan="3">Front Page News</th></tr>
<tr>
<td>
UCI student on climbing wall</td>
<td>UC Irvine Students Reach New Heights
By So Andso
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Gravida dictum fusce ut placerat orci nulla pellentesque dignissim enim. Donec enim diam vulputate ut pharetra sit.</td>
<td>At erat pellentesque adipiscing commodo elit at imperdiet dui accumsan. Praesent elementum facilisis leo vel fringilla est ullamcorper eget. Faucibus nisl tincidunt eget nullam non.
Est pellentesque elit ullamcorper dignissim cras.</td>
</tr>
<tr>
<td>Robots Need Love Too
By Man Dangan
Eget felis eget nunc lobortis. Elementum curabitur vitae nunc sed. Nunc id cursus metus aliquam eleifend mi in. Morbi tristique senectus et netus et malesuada fames ac. Turpis in eu mi bibendum neque egestas.
Id interdum velit laoreet id.</td>
<td>Luctus venenatis lectus magna fringilla urna. Donec adipiscing tristique risus nec feugiat in.
Enim ut tellus elementum sagittis vitae et leo. Iaculis eu non diam phasellus vestibulum lorem sed risus.
Bibendum est ultricies integer quis auctor elit sed. Enim lobortis scelerisque fermentum dui faucibus.</td>
<td>
Engineer placating future overlord</td>
</tr>
</table>

Find other ways to present content that is not suited for tables, such as using columns, headings and sections[66] within Word.

Return to:

- Item #7a. Tabular Data < Start in Word Checklist
- Item #7b. Title in Table < Start in Word Checklist

Table Cells: Data and Header

There are two types of table cells: data cells and header cells.

Data cells contain data. Most table cells are data cells.

Header cells do not include data but rather define the data that resides in a table column or row; they're like column or row labels, in a sense.

For example:

Team (header cell)	**Games Played (header cell)**	**Wins (header cell)**	**Loses (header cell)**
Giants (header cell[67])	12 (data cell)	8 (data cell)	4 (data cell)
Dodgers (header cell)	12 (data cell)	3 (data cell)	9 (data cell)

Return to:

- Item #7c. Header Cells < Start in Word Checklist
- Item #14a. Headers Appropriate? < PDF Remediation Checklist

Programmed Header Cells

A properly programmed header cell provides additional structural/contextual information for assistive technology users when they read an associated cell. For example…

[66] "Sections" as in, document sections as defined by Section Breaks

[67] While this cell contains a data point — "Giants" is a data point relative to its column header, "Team" — it also helps define the subsequent data points in its row, so it would be a header cell, not a data cell.

Consider the table below: let's say all the cells in its first row are properly programmed to be header cells (as they should be); when a screen reader reads the orange cell with the thicker borders, it will say "2g" and provide a reminder that this data is in the "Protein" column — very helpful!

Food	Fat	Sugar	Protein
Apple	0.2g	10g	0.3g
Carrot	0.2g	4.7g	0.9g
Avocado	15g	0.3g	2g

If the "Protein" cell wasn't properly programmed to be a header cell, the screen reader would only read "2g" and the user would have to remember on their own that "2g" relates to "Protein."[68]

It's appropriate to program the cells in a table's first row as header cells when they describe (i.e., inform the meaning of) the contents of each cell in their column. For instance, in the previous table example, "Food" describes "Apple," "Carrot" and "Avocado; "Fat" describes "0.2g" (twice) and "15g"; etc.

By contrast, the table below does not have header cells.

44	16	8
3	97	21
15	63	52

Return to:

- Item #7c. Header Cells < Start in Word Checklist
- Item #14a. Headers Appropriate? < PDF Remediation Checklist

[68] Non-assistive technology users don't have to adopt this burden (which is magnified in longer tables), so why should assistive technology users have to? Especially when, a simple adjustment on the developer's part would allow them to avoid it. This is, in a sense, the entire spirit of accessibility — how can we, as content developers, remove barriers and burdens our audience members shouldn't have to face?

Header Cells Throughout the First Column

If appropriate, you can also make the first cell in each row a header cell, which will provide even more contextual information through assistive technologies. For example…

The “Avocado” cell in the table below describes the contents of all of the other cells in its row — they all pertain to avocados — so it’d be appropriate to program that cell as a header cell; once that was done, when a screen reader read the orange cell with thicker borders, it would provide contextual reminders that “2g” was in the “Protein” column and “Avocado” row — very helpful!

Food	Fat	Sugar	Protein
Apple	0.2g	10g	0.3g
Carrot	0.2g	4.7g	0.9g
Avocado	15g	0.3g	2g

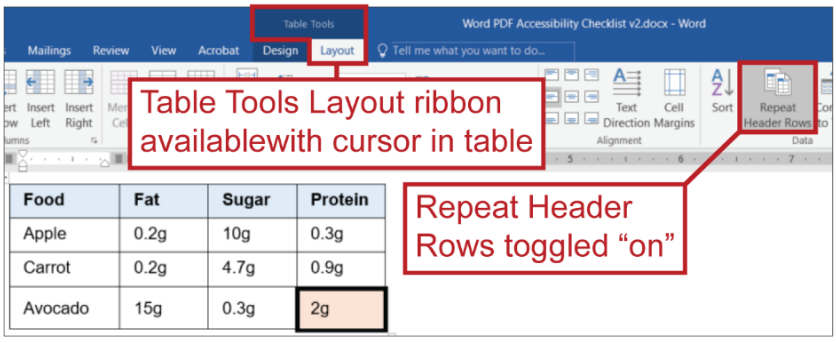
Microsoft Word does not provide capabilities for programming the first cell in each row as a header cell, so that programming would need to be done in Adobe Acrobat Pro, by manually editing a table cell’s tag.

Programming Header Cells in Word

In Word, you can program all of the cells in a table’s first row to be header cells by using the Repeat (as) Header Row setting. This setting can be applied in two ways:

Option #1:

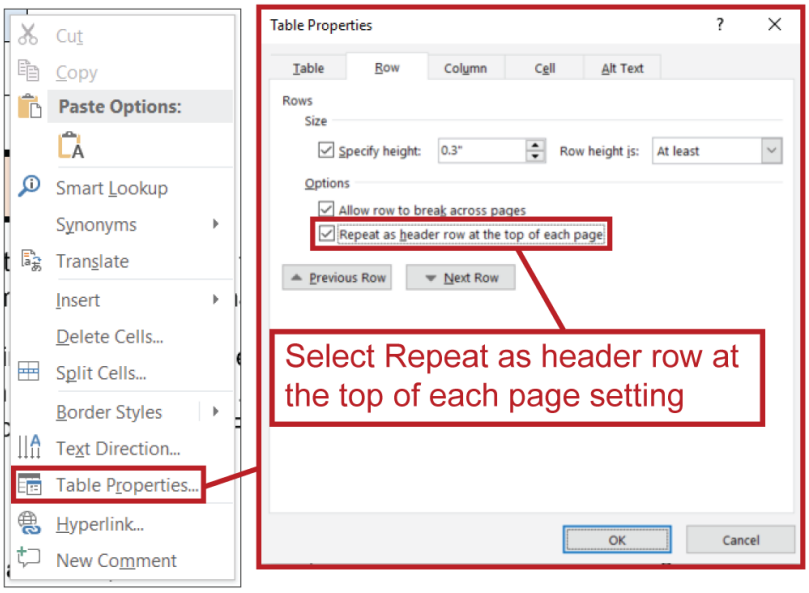
1. Place your cursor anywhere within the table’s first row, thus enabling the Table Tools Layout ribbon
2. Within that ribbon, select the Repeat Header Row button to toggle that setting on[69]



[69] Once you use this method to assign the table’s first row as a header row, you can use the same method to assign its second row as a header row (not that you’d want/need to in most cases); in fact, you can use this method to assign any row as a header row as long as the row above it has already been assigned as a header row.

Option #2:

1. Right-click any cell within a table's first row
2. Select Table Properties within the resulting menu to open the Table Properties panel
3. Open the panel's Row tab
4. Select (i.e., check) the Repeat as header row at the top of each page setting



Return to:

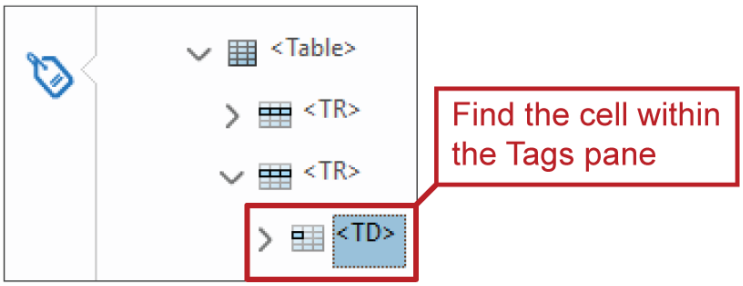
- Item #7d. Header Cell Programming < Start in Word Checklist

Programming Header Cells in Adobe Acrobat Pro

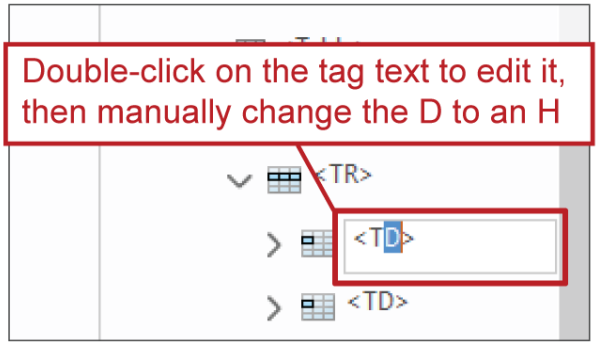
You can also program table header cells in Adobe Acrobat Pro.

Option #1 — Manually Edit Cell's Tag in Tags Pane:

1. Find the cell's tag within the Tags pane (it will be a <TD> tag)

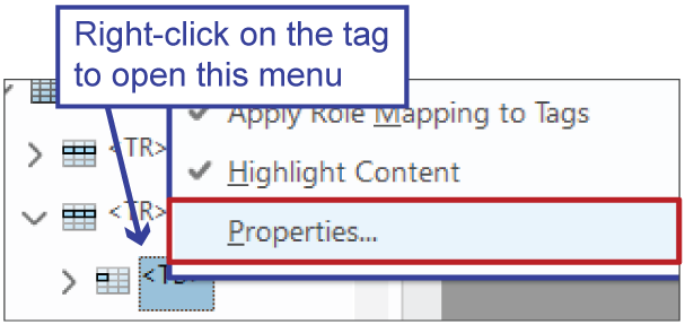


2. Double-click the tag text, which should enable you to edit the tag text, and change “TD” to “TH”

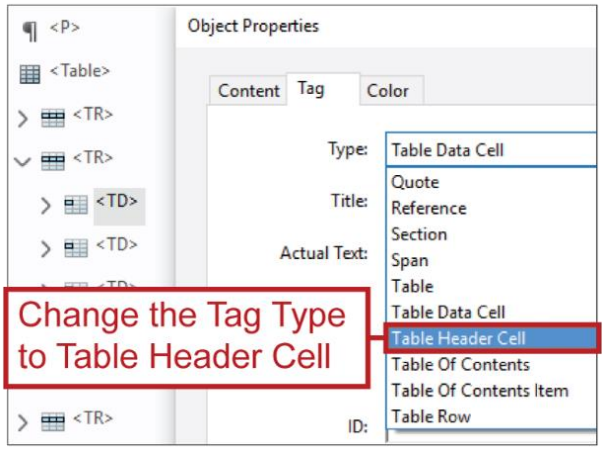


Option #2 — Edit Tag’s Type in Object Properties:

1. Find the cell’s tag within the Tags pane (it will be a <TD> tag)
2. Right-click on the tag and choose Properties to open the Object Properties panel

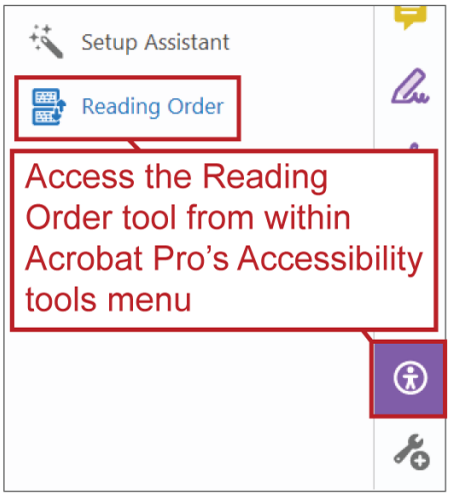


   a. That panel should open with the Tag tab displayed, but if not, navigate to the Tag tab
3. In the Type drop menu, select Table Header Cell

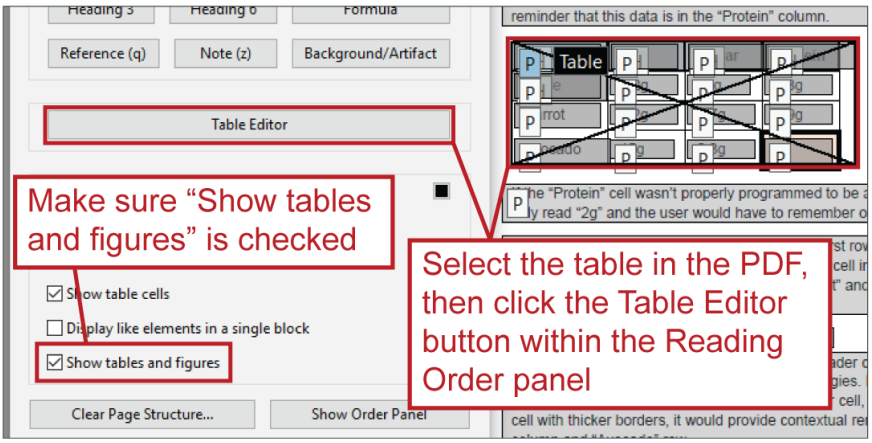


Option #3 — Use the Table Editor:

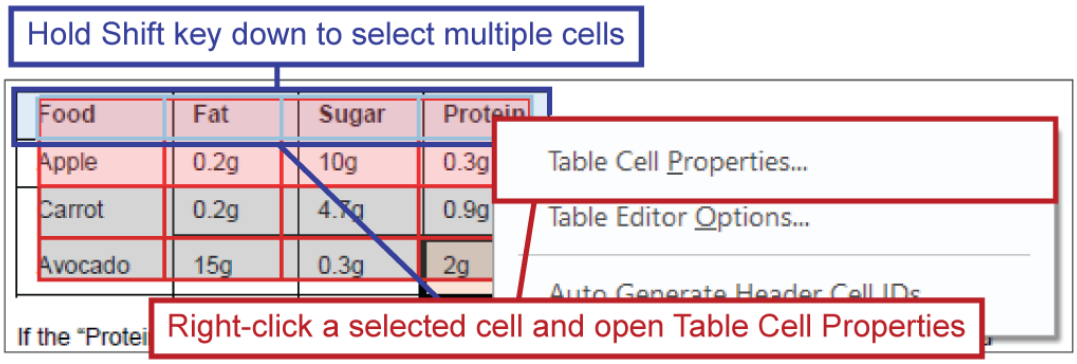
1. Open Acrobat Pro's Accessibility tools and select Reading Order to open the Reading Order tool panel



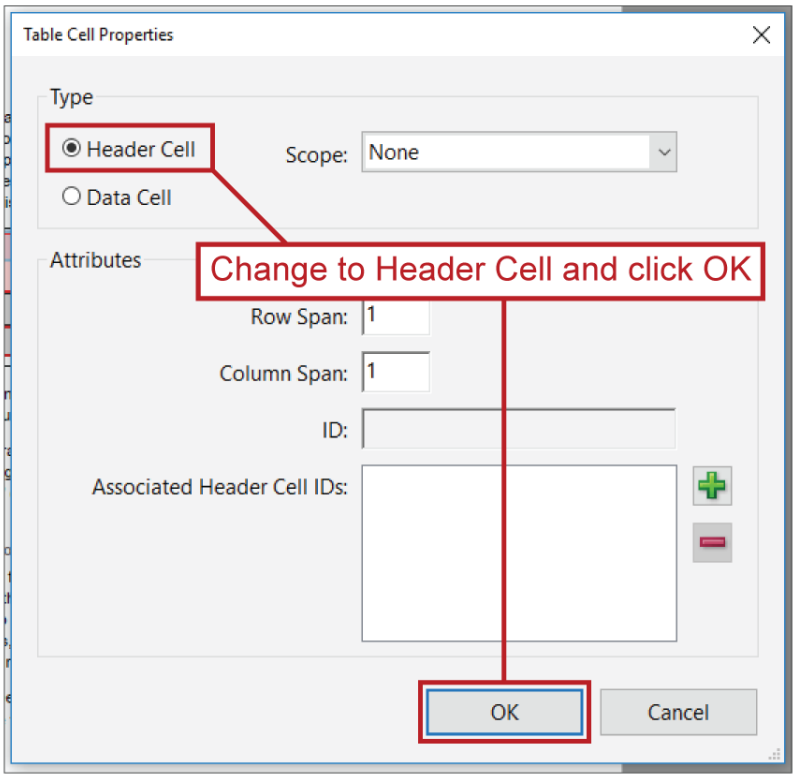
2. Make sure "Show tables and Figures" is checked within that panel, thus enabling you to select a table
3. Select (i.e., click on) the table you want to edit
4. Click the Table Editor button within the Reading Order tool panel



5. Right-click the cell you want to program as a header cell and select Table Cell Properties within the resulting menu to open the Table Cell Properties panel
    a. You can also program multiple cells by holding down the Shift key, selecting multiple cells and right-clicking any of those cells and then selecting Table Cell Properties



6. Select the Header Cell radio button, then click the OK button to save the change

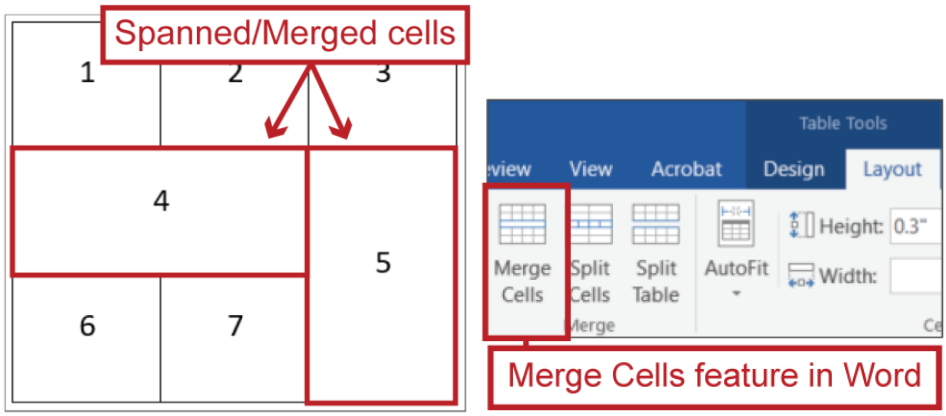


Return to:

- Item #14a. Headers Appropriate? < PDF Remediation Checklist

Spanned/Merged Cells

A spanned cell is a cell that spans multiple rows and/or columns within a table. The feature in Word and other Microsoft products used to combine cells together in this way is called Merge Cells, so these types of cells are also referred to as “merged cells.”



Merged cells that have been exported to PDF require additional remediation in Adobe Acrobat Pro in order for them to be read properly by assistive technologies, so it’s best to avoid merged cells, if possible.

Return to:

- Item #7e. Merged Cells < Start in Word Checklist
- Item #15. Regularity < PDF Remediation Checklist
- Item #15a. Spanned/Merged Cells < PDF Remediation Checklist

Remediating Spanned/Merged Cells

There are two goals you seek to achieve when remediating spanned/merged cells:

1. Program the cell so assistive technologies can recognize that it spans multiple rows and/or columns (see Programming a Spanned/Merged Cell)
2. Ensure that assistive technologies can recognize the table as having the same number of cells in each row and table (see Programming a Table So It Has the Same Number of Cells in All Rows and Columns)

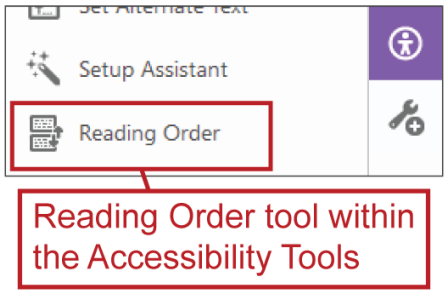
Return to:

- Item #7e. Merged Cells < Start in Word Checklist
- Item #15a. Spanned/Merged Cells < PDF Remediation Checklist

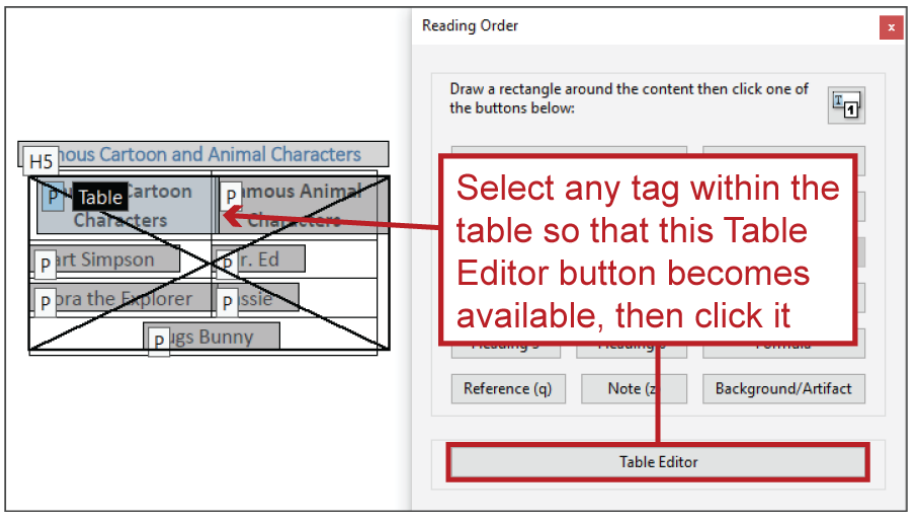
Programming a Spanned/Merged Cell

You'll use Adobe Acrobat Pro's Table Editor to program spanned cells so assistive technologies can recognize that they span multiple rows and/or columns:

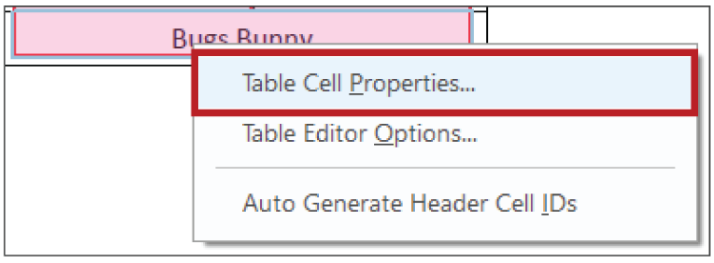
1. Open the Reading Order tool



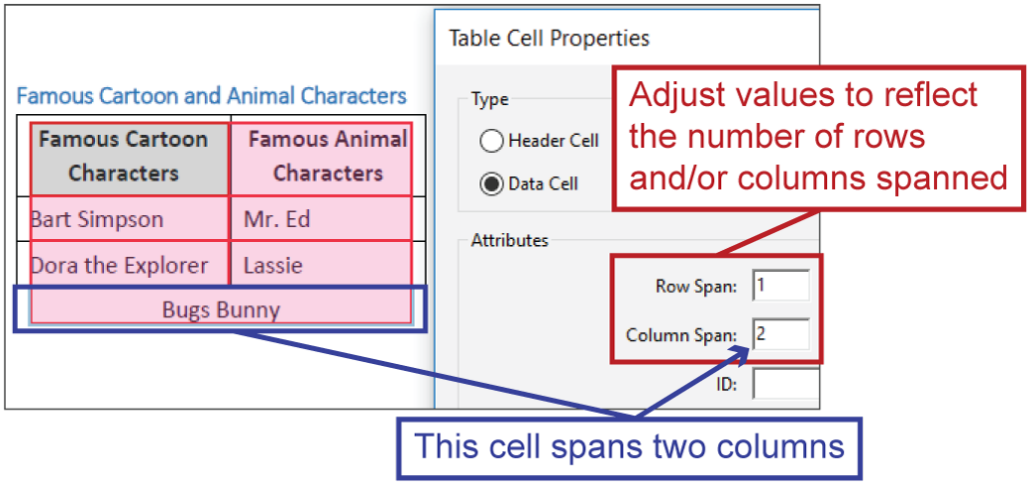
2. Select any tag within the table so that the Reading Order tool's Table Editor button becomes available, then click that button



3. Right-click on the spanned cell and select Table Cell Properties to open the Table Cell Properties panel



4. If the cell spans multiple rows, change the Row Span value so it reflects the number of rows spanned; if the cell spans multiple columns, change the Column Span value so it reflects the number of spanned columns



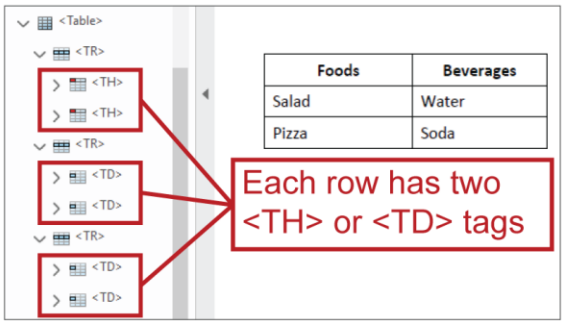
Return to:

- Item #15a. Spanned/Merged Cells < PDF Remediation Checklist

Programming a Table So It Has the Same Number of Cells in All Rows and Columns

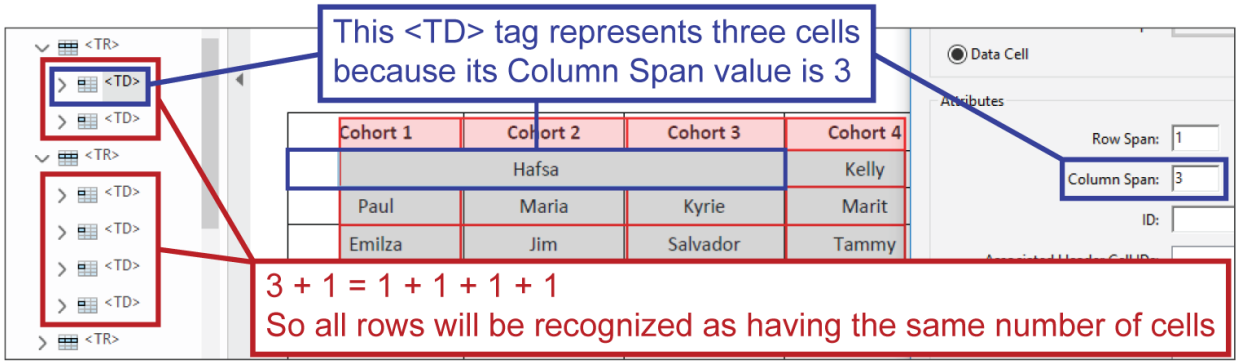
You'll use the Tags pane to ensure that assistive technologies can recognize a table as having the same number of cells in all rows and columns.

If there are no spanned/merged cells in the table, the table needs to have the same number of <TH> or <TD> tags in each table row.

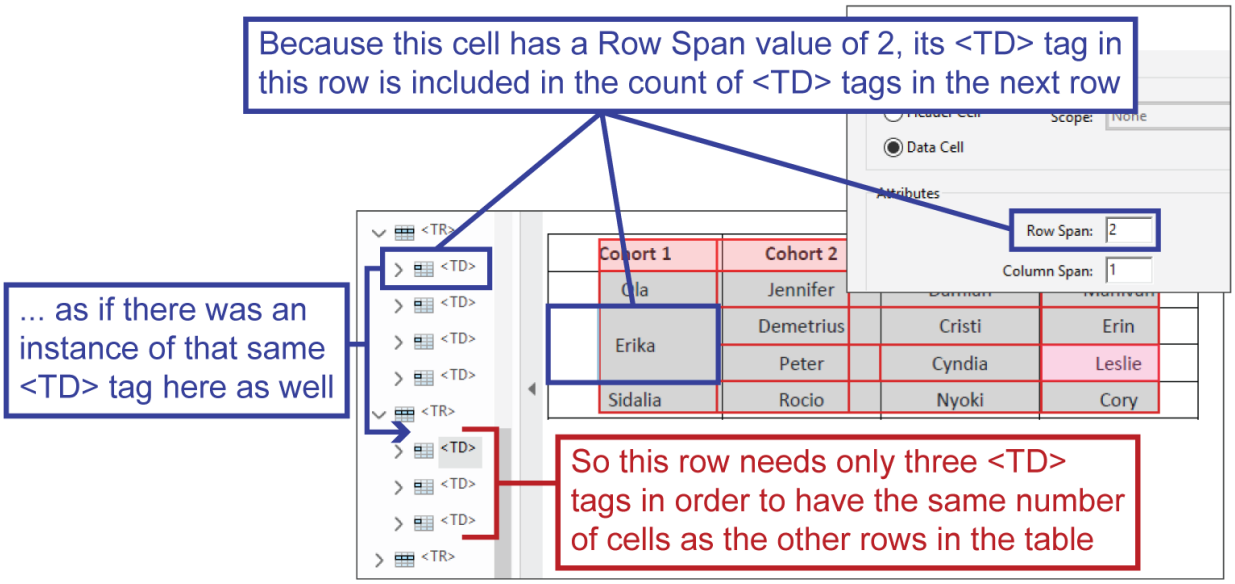


If there are spanned/merged cells in the table, their tags represent more than one cell; this must be taken into account when considering the number of <TH> or <TD> tags in each table row. Specifically, the number of cells those tags represent is the same number of columns or rows those cells span. For instance…

If a cell spans three columns (i.e., its Column Span value is set to 3 in Table Cell Properties), its <TH> or <TD> tag represents three <TH> or <TD> tags. If, let's say, all other rows in the table contain four cells then the row containing the spanned cell should have two <TH> or <TD> tags: one of those tags representing three cells and another tag representing one cell; three cells plus one more cell equals four cells, same as are in the table's other rows.

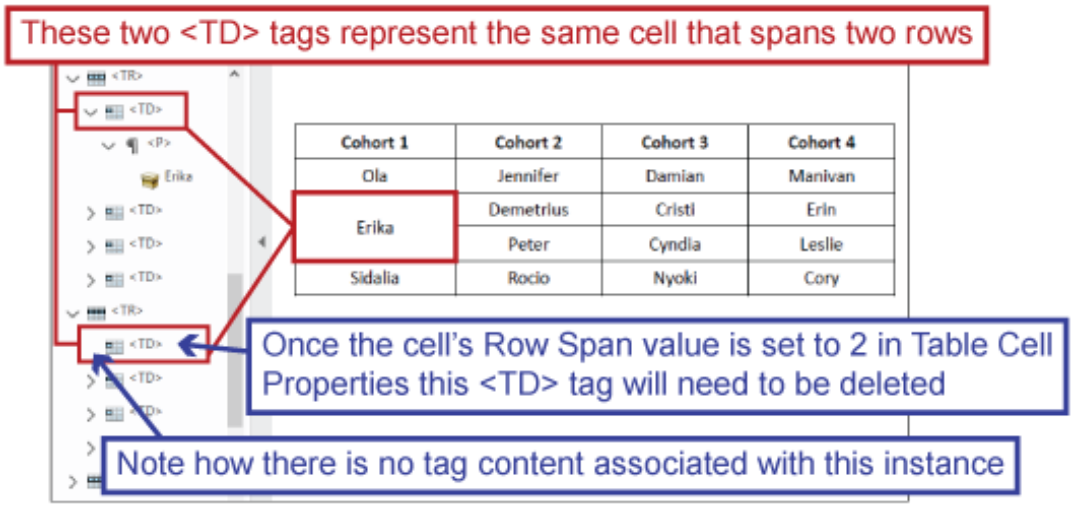


As another example, if a cell spans two rows (i.e., its Row Span value is set to 2 in Table Cell Properties), then the second of those two rows does not need, and should not have, a <TD> tag representing that cell; the spanned cell's <TD> tag in the first row is included in the count of <TD> tags in the second row.

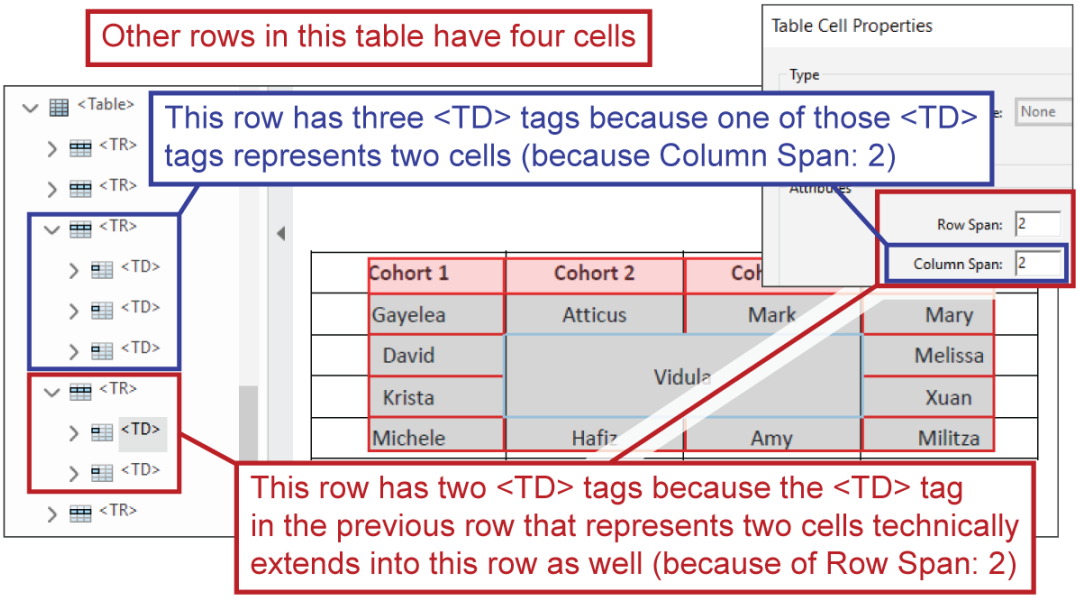


However, Microsoft Word may include, when exporting to PDF, a <TD> tag within each row that a cell spans. Only the first <TD> tag associated with that cell will have actual tag content associated with it; the other <TD> tags associated with that cell will have no tag content associated with them. In such cases, you will need to delete the extra, unnecessary (and empty) <TD> tags where they occur. For example…

In the following screen shot, you can see how the table in the screen shot above first appeared when exported from Word to PDF, and you can see the empty <TD> that was added to the spanned row and needs to be deleted.



If a cell spans two columns and two rows (i.e., its Row Span and Column Span values are set to 2 in Table Cell Properties), then both rows that it is in will have fewer <TD> tags than the other rows in the table: its first row will have one fewer <TD> tag (since one of its <TD> tags will count for two cells), while its second row will have two fewer <TD> tags (since the two-cell <TD> tag from the previous row technically extends into the second row as well).



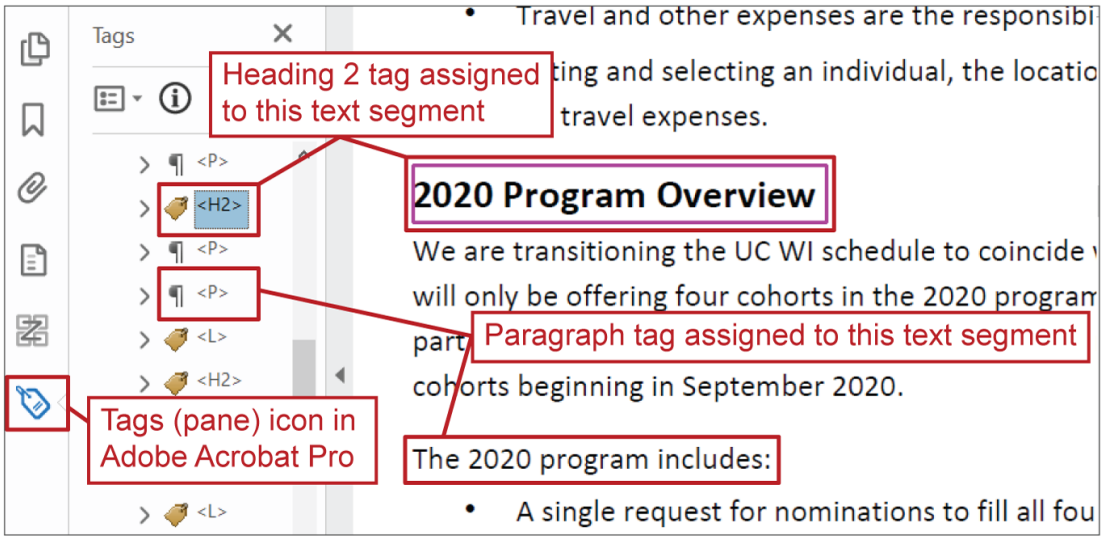
Return to:

- Item #14a. Spanned/Merged Cells < PDF Remediation Checklist
- Item #15b. Number of <TD> or <TH> Tags in Each Row < PDF Remediation Checklist

Tag (noun)

Tag refers to how content is structurally programmed within a PDF which in turn determines how it will be interpreted and read by assistive technologies. For instance…

In the following screen shot, you can see that the text segment “2020 Program Overview” has an <H2> (Heading 2) tag, so structurally it’s a Heading 2 and it will be read by screen readers as a Heading 2; the text segment “The 2020 program includes:” has a <P> (paragraph) tag, designating it as body text.



Return to:

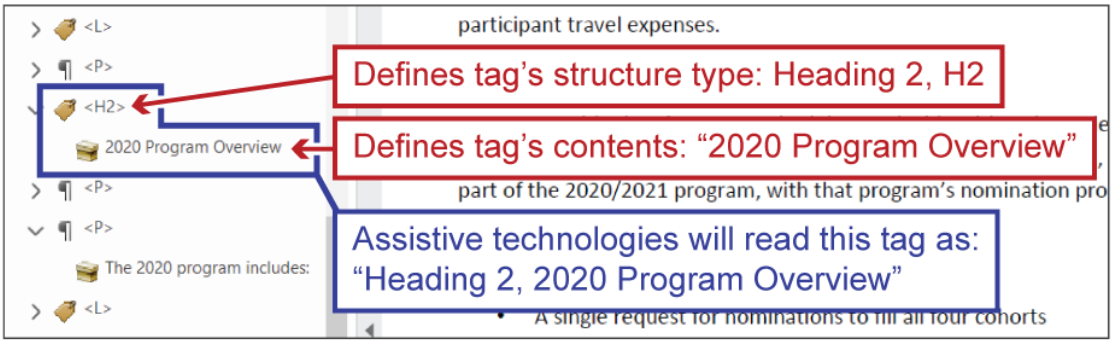
- Item #2. Body Text < Start in Word Checklist

Tag Organization and Appearance

At the most basic level, tags are typically composed of two components:

1. The tag contents define what is in the tag — i.e., what assistive technologies will read when they encounter the tag; tag contents are accompanied by the box-like icon (as seen in the screen shot following this list)

2. The tag container defines the tag's structure type — i.e., what assistive technologies will read it as (i.e., what type of element); most tag containers are accompanied by a tag-like icon (as seen in the screen shot following this list), but some tag containers have unique icons (see: Paragraph <P> Tags and Table Tags)



You'll typically find this basic, tag container + tag contents organization with headings and paragraphs that do not include links.

Other types of elements have, or necessitate, more tag components and more complex tag organization.

See also:

- Editing Tag Organization Through the Tags Pane

Return to:

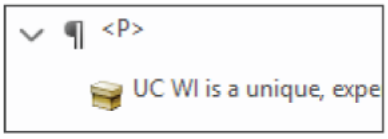
- Item #4. Tagged PDF < PDF Remediation Checklist

Paragraph <P> Tags

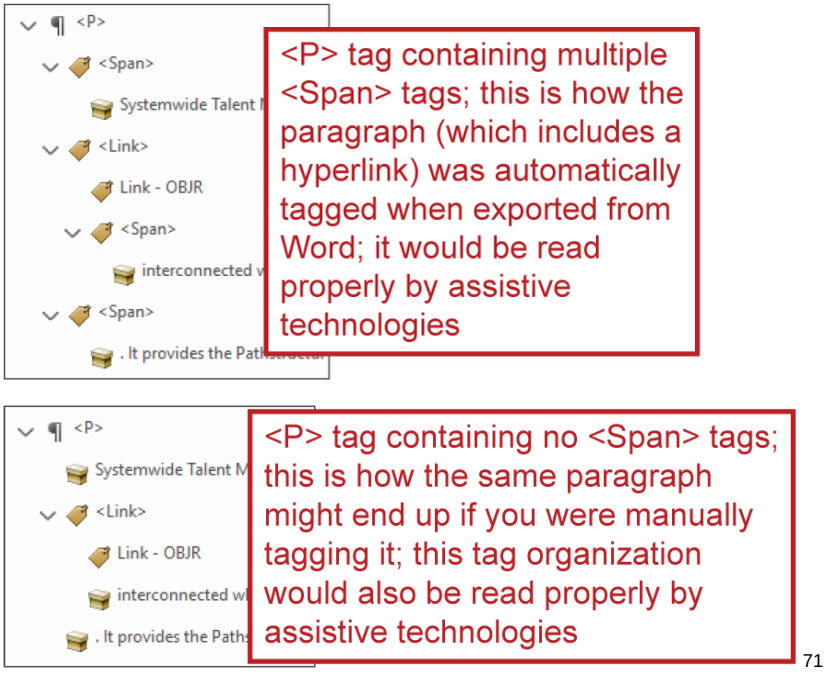
Paragraph tags appear in the Tags pane with a <P> shorthand label and a paragraph-symbol icon.



Many paragraph tags will consist only of the tag container and tag contents.



If a paragraph includes one or more links, or other elements that require separate tags, the paragraph <P> tag container may contain multiple tag contents and/or tag containers (such as <Span>[70] tag containers or <Link> tag containers).



[71]

Text that is assigned the Normal Style or Body Text Outline Level in Word will be tagged with a paragraph tag when exported to PDF.

Heading Tags

Heading tags appear in the Tags pane with an <H#> shorthand label where the # represents the heading's level within the heading hierarchy and will be a number 1-6[72]. Heading tags also appear with the standard tag icon.

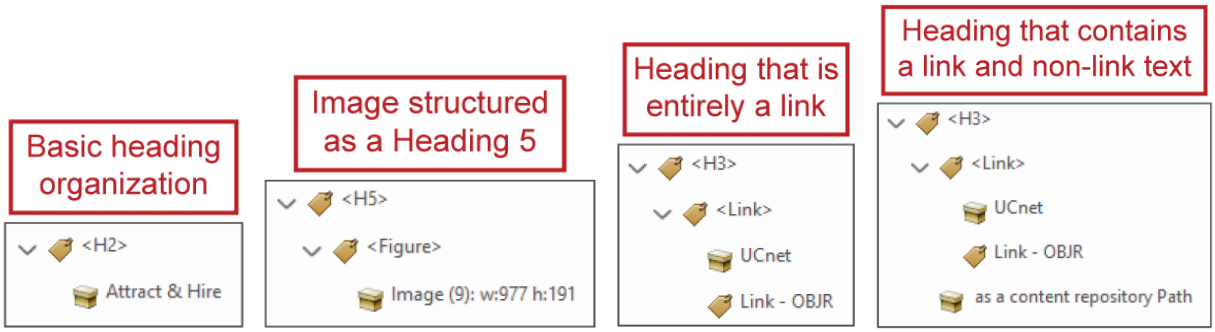


[70] Not to be confused with spanned cells, <Span> tag containers host tag contents/containers that need to be given unique properties — such as a unique language setting — and/or that need to be read separately from other tag contents/containers within the same parent tag.

[71] This example is, in part, intended to illustrate that not all the <Span> tag containers added during the export from Word to PDF process are 100% necessary — their contents would likely be read the same were they to be nested directly in the <Span> tag container's parent tag; that being said, it's usually safest to just leave those <Span> tag containers as is (it's also less work for you), as opposed to moving the <Span> tag container's contents and then deleting the containers.

[72] "1-6" because PDFs currently only support heading levels 1-6

Heading tags typically just include the tag contents associated with the heading text, but they can host other tags that you want to be structured as headings.



Text that is given a Heading # Style or Level # Outline level in Word should be tagged as a heading when exported to PDF.

Link Tags

Link tags appear in the Tags pane with a <Link> shorthand label and the standard tag icon.



In order for a link to be accessible to, and read properly by, assistive technologies, it needs three key components:

1. A <Link> tag

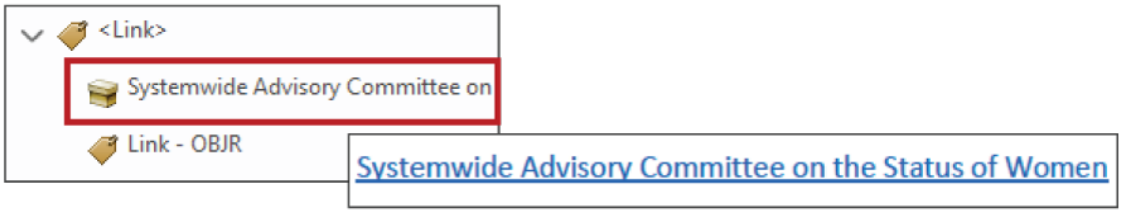


2. A <Link – OBJR> tag nested within the <Link> tag (see also: Creating a <Link – OJBR> Tag Through Find Element)

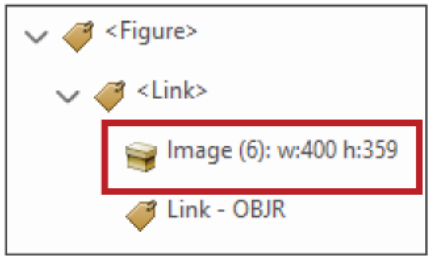


3. And something that provides information as to what the link is and/or where it directs
    a. This is typically accomplished by nesting the link text's tag or tag contents within the <Link> tag (as a peer of the <Link – OJBR> tag) so that the link text conveys this information





    b. If an image is hosting the link instead of text, you would have an image tag contents nested within the <Link> tag and the image's alt text conveying this information



    c. In less common circumstances, alt text that provides this information can be assigned to the <Link> tag



Links that are created in Word using the Insert Hyperlink feature should be properly tagged as links when exported to PDF.

Return to:

- Item #10 Tagged Annotations < PDF Remediation Checklist

List Tags

List tags appear in the Tags pane with an <L> shorthand label and the standard tag icon.



In order for a list to be properly interpreted by assistive technologies, its list <L> tag must contain a number of other, child tags nested within it, and those child tags must be organized properly:

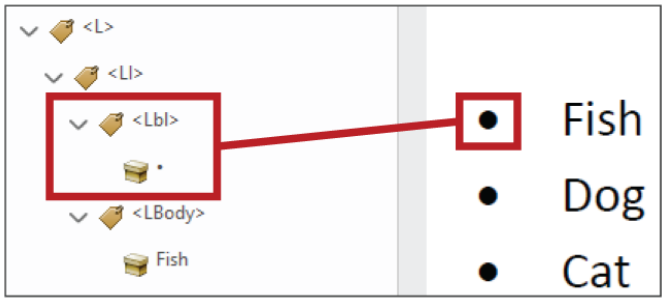
- A list tag must contain a list item <LI> tag for each individual item in the list

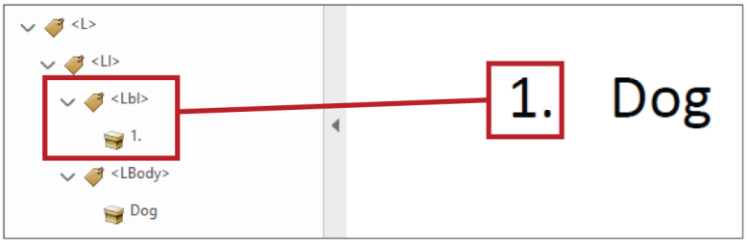


  - Each list item <LI> tag should contain a list item body <LBody> tag
    - Each list item body <LBody> tag should contain the list item's tag contents



- Each list item <LI> tag may also contain a label <Lbl> tag
  - If a label <Lbl> tag is present, it must be ordered above the list item's list item body <LBody> tag, and...
  - If a label <Lbl> tag is present, it must contain the tag contents associated with the list item's bullet or bullet icon, or if it's a numbered list, the list item's number or letter





Lists that are created in Word using the Bullets (bulleted list) or Numbering (numbered list) features should be properly tagged as lists when exported to PDF (though, look for this common list error when reviewing the PDF in Adobe Acrobat Pro).

Return to:

- Item #16. List Items, and Lbl and LBody < PDF Remediation Checklist

Different List Levels (Sub-lists)

Lists often feature items at different levels within the list. These level hierarchies within lists communicate certain parent-child-peer relations between list items:

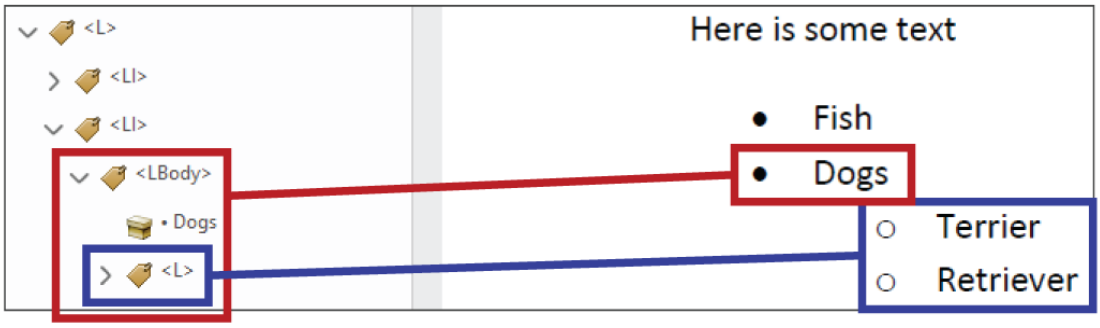
- For example, this would be considered a level 1 list item; it is the parent of the two child list items immediately below
  - This would be considered a level 2 list item; it is a child of the parent list item above and a peer of the list item immediately below
  - This would also be considered a level 2 list item; it is a child of the parent list item further above, a peer of the list item immediately above and the parent of the child list item immediately below
    - This would be considered a level 3 list item; it is a child of the parent list item immediately above

In the context of PDF tags, each parent list item's child level is treated as its own list with its own <L> tag. For example…

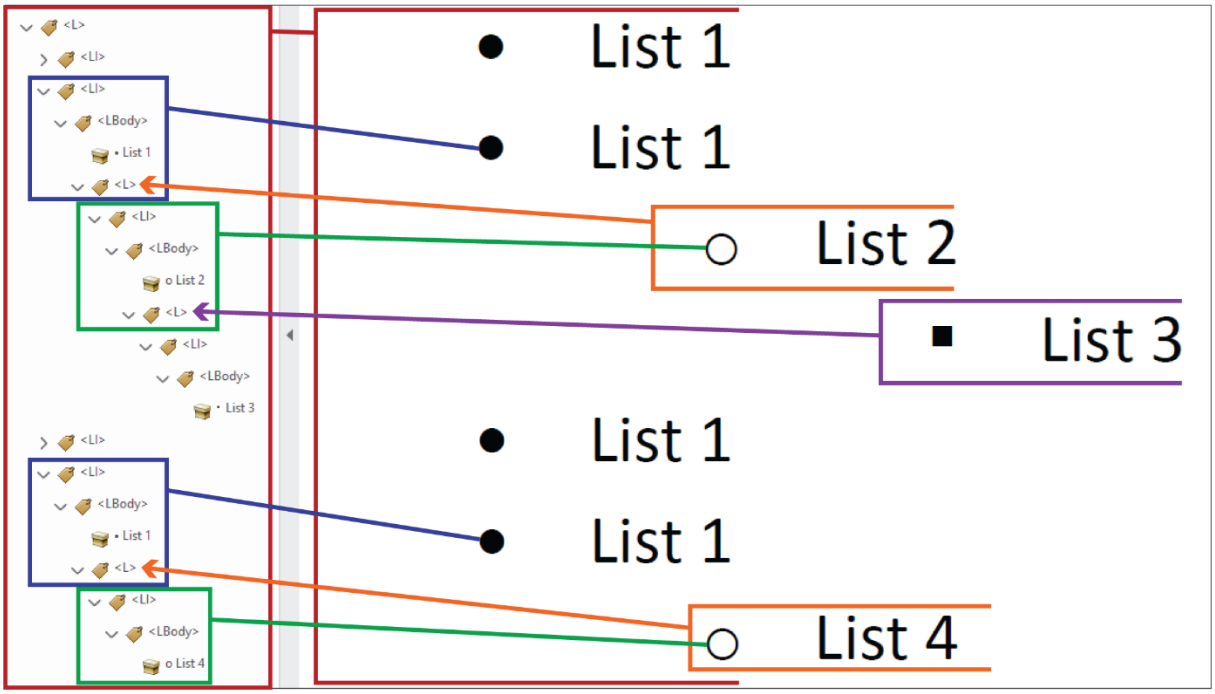
The multi-level list below illustrates what list (i.e., <L> tag) each list item would belong to (note that list items on the same list level are not necessarily in the same list; list items must be on the same level *and* have the same parent list item to be in the same list):

- List 1
- List 1
    - List 2
    - List 2
        - List 3
        - List 3
    - List 2
        - List 4
- List 1
    - List 5
        - List 6

Child-level lists must have their list <L> tag nested within their parent list item's list body <LBody> tag.

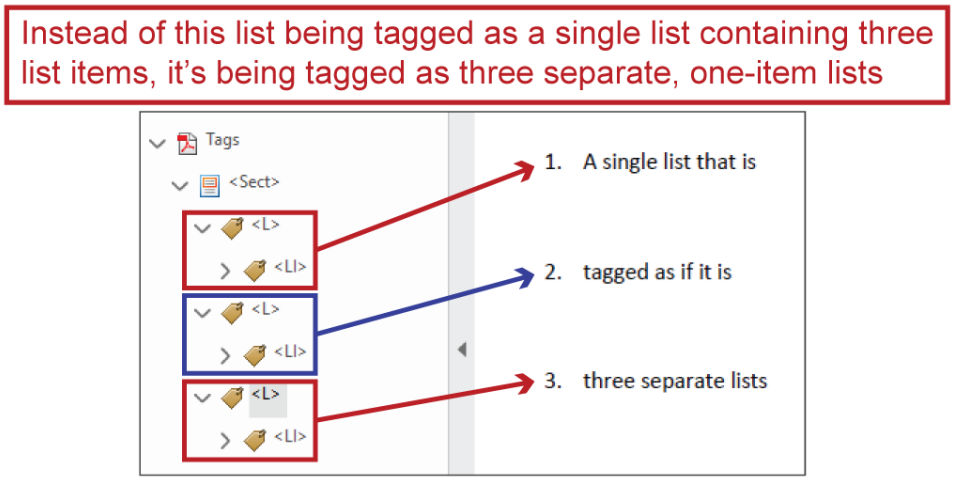


Here's another, more complex example:



Common List Error the Adobe Acrobat Pro Accessibility Checker Will Miss

One of the most common errors that can occur with lists is an error that the Adobe Acrobat Pro Accessibility Checker is not capable of identifying; it is illustrated in the screen shot below.



The error is that list items that are in the same list and should be nested within the same list <L> tag are instead nested within separate list <L> tags. The Checker is incapable of recognizing this because it doesn't know which list items belong in which list; it can only check if the tag structure within a list <L> tag is correct. So, the Checker would mistakenly interpret the list in the previous screen shot not as one incorrectly tagged list but rather as three correctly tagged lists.

If you notice this error within a PDF, you will need to manually edit the tag organization through the Tags pane. You may also be able to correct the error in Word (if you have the source file) by manually reconnecting list items[73], but you would then need to re-export the document to PDF.

Return to:

- Item #17. Manual List and List Item Tag Check < PDF Remediation Checklist

Table Tags

Table tags appear in the Tags pane with a <Table> shorthand label and a table-like icon.

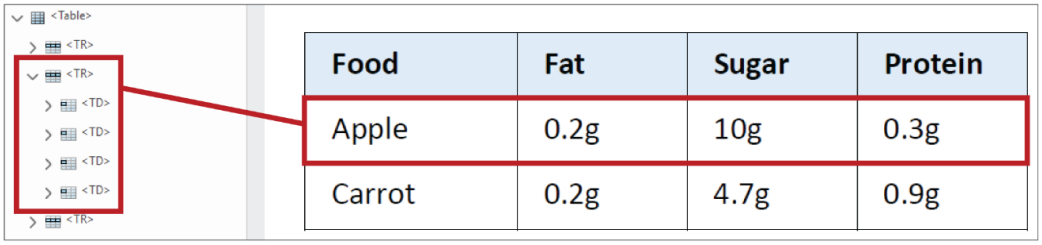


In order for a table to be properly interpreted by assistive technologies, its <Table> tag must contain a number of other, child tags nested within it, and those child tags must be organized properly:

- Each table row must have its own table row <TR> tag

  - Each table row <TR> tag must contain a table data <TD> tag or table header <TH> tag for each cell within the row[74]

Food	Fat	Sugar	Protein
Apple	0.2g	10g	0.3g
Carrot	0.2g	4.7g	0.9g

    - Each table data cell must have a <TD> tag

    - Each table header[75] cell must have a <TH> tag

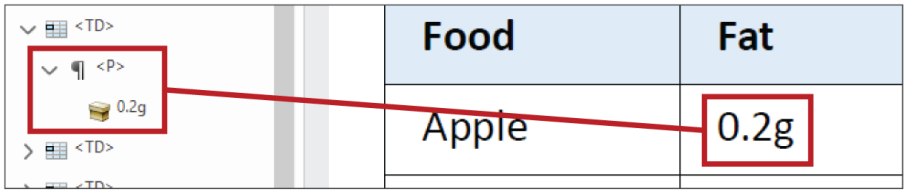
      

[73] To manually reconnect one list item to the list item above it, set your cursor at the start of the (lower) list item, then press the Backspace key until the list item becomes part of the list item above it; then hit the Enter/Return key to make the list item its own list item again.

[74] Unless one of those <TD> or <TH> tags is properly programmed to represent a spanned/merged cell.

[75] See Table Cells and Header Cells for more information on what differentiates a table header cell from a table data cell

- Each table header cell <TH> tag and table data cell <TD> tag must contain a tag or tag contents for what is in the cell



Tables that are created in Word using the Insert Table feature should be tagged as tables when exported to PDF (see also: Programming Header Cells in Word and Spanned/Merged Cells)

See also:

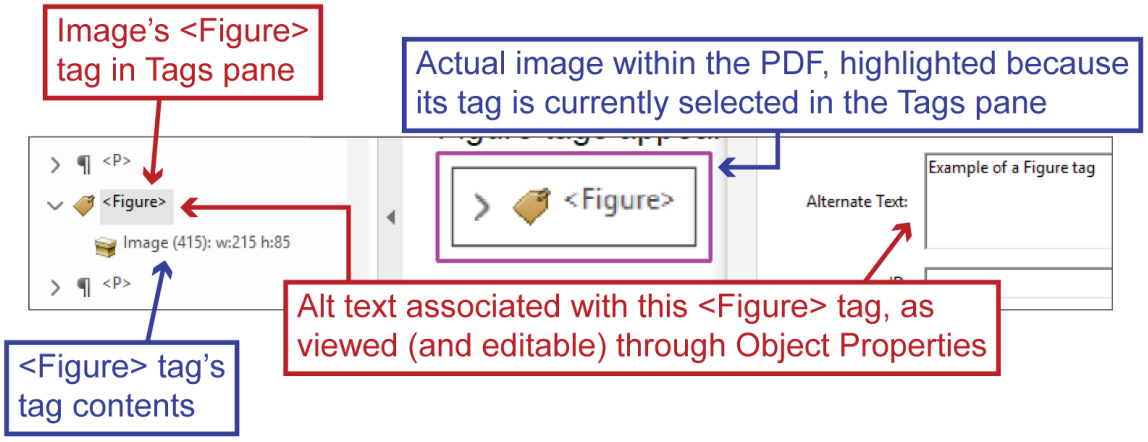
- Programming Header Cells in Adobe Acrobat Pro
- Remediating Spanned/Merged Cells

Figure Tags

Figure tags appear in the Tags pane with a <Figure> shorthand label and the standard tag icon.

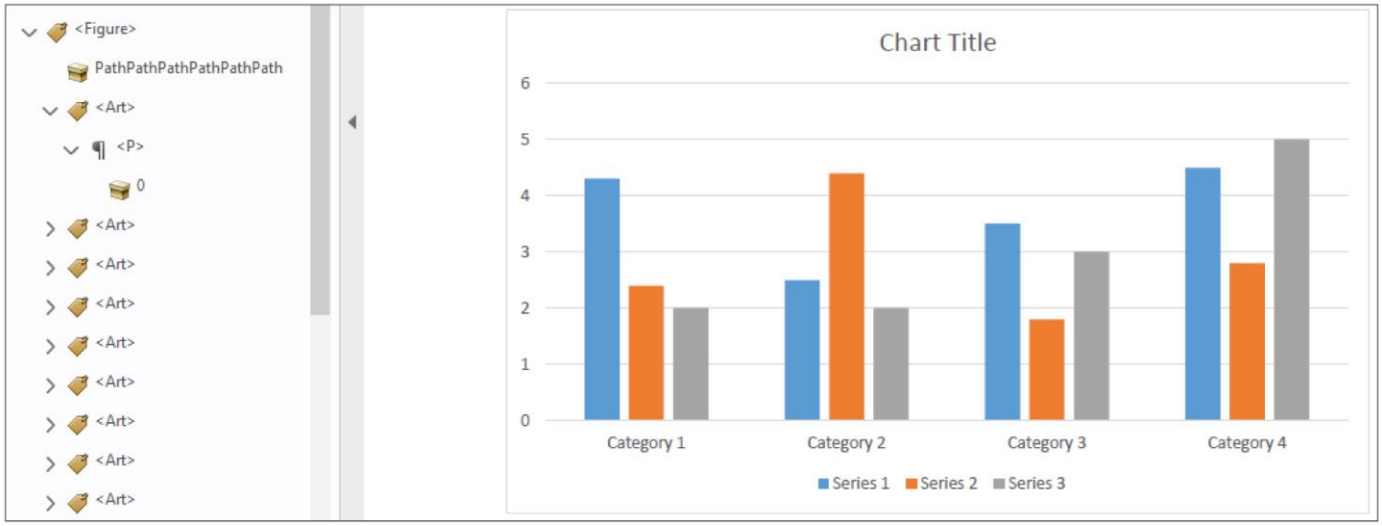


<Figure> tags typically contain image tag contents associated with graphical elements — such as charts, graphs, images and shapes — and have alt text that describe the contents[76].



[76] Assuming the content is not decorative. If the content is decorative, it should be turned into an artifact, at which point the tag contents would disappear, leaving an empty <Figure> tag container that should be deleted.

Some types of graphics, such as Charts and Smart Art, will export from Word or PowerPoint to PDF as a <Figure> tag containing multiple other tags. For example:



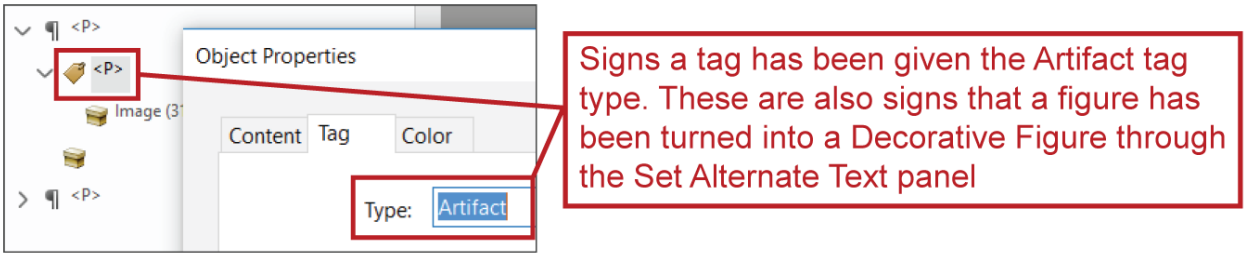
In such cases, you will need to determine the best way to communicate the contents to assistive technology users: it may make sense to leave some, or all, of the nested tags and let them communicate the graphic's contents, tag by tag; it may make sense to remove the nested tags and give the <Figure> tag alt text that describes the entire graphic.

Artifact Tags

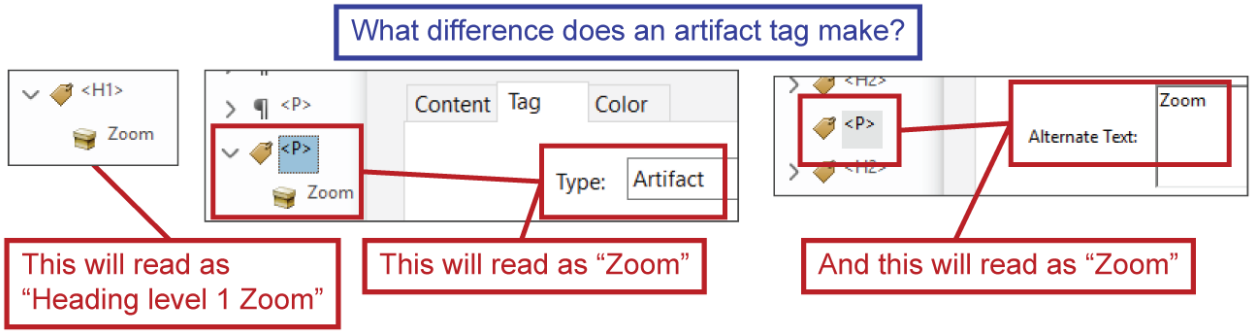
The artifact tag type can be a source of confusion, as it doesn't directly relate to real artifacts.

Tags set to the artifact type will sometimes appear in the Tags pane with an <Artifact> label and the standard tag icon, but just as often, if not more often, they'll appear with a <P> shorthand label and the standard tag icon instead of the paragraph icon associated with real <P>, as in paragraph, tags. Tags set to the artifact type can also be identified through the Object Properties panel, which will display their tag type as Artifact.

You can manually assign any tag the artifact type, but most often, tags are assigned that type inadvertently by using the Set Alternate Text tool's Decorative Figure setting.



Giving content the artifact tag type is not the same as turning it into an artifact: the latter hides the content from assistive technologies while the former merely removes the structural information associated with the tag container that assistive technologies would read; this means that if there is other readable information associated with the tag — such as alt text or tag content — it will still be read by assistive technologies.



Given all this, there is little, if any, purpose to using artifact tags.

Tag or Tagging (verb)

Tagging refers to the act of programming structure for assistive technologies, which is done through tags (noun).

In the context of working in Word, "tagging" is most often used to describe assigning text a Heading Style — for example, by assigning a paragraph the Heading 2 Style, you tag that paragraph as a Heading 2 — but it can also refer to the purposeful way in which you create lists, table header rows, links, etc. within Word so that those elements are properly tagged when exported to PDF.

In the context of remediating a PDF within Adobe Acrobat Pro, "tagging" most often refers to assigning or re-assigning content a particular tag structure type; for example, if you might tag the cells in a table's first row as header cells.

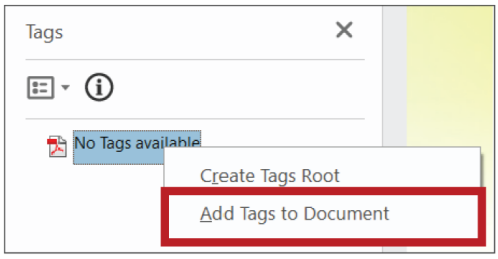
Return to:

- Item #1. Headings < Start in Word Checklist
- Item #1b. Tagged as Headings < Start in Word Checklist
- Item #4. Tagged PDF < PDF Remediation Checklist

Autotagging a PDF in Adobe Acrobat Pro

There are two methods in Adobe Acrobat Pro for autotagging a PDF:

1. The Autotag Document feature (one of the Accessibility tools) will automatically assign tags to a PDF's contents
    a. It is most useful when remediating an untagged PDF but can also be used to retag an already-tagged PDF (though, it will overwrite all existing tags, so it should be used cautiously in such cases)
2. If the Tags pane reads "No Tags available," you can right-click that text and choose Add Tags to Document to initiate the autotagging process; you can also select Add Tags to Document from within the Tags pane's Options menu



    a. If the Tags pane reads "No Tags available," the Tags pane's Options menu will be limited to Create Tags Root and Add Tags to Document, but if you choose Create Tags Root, you'll be able to access the wider array of Tags pane options

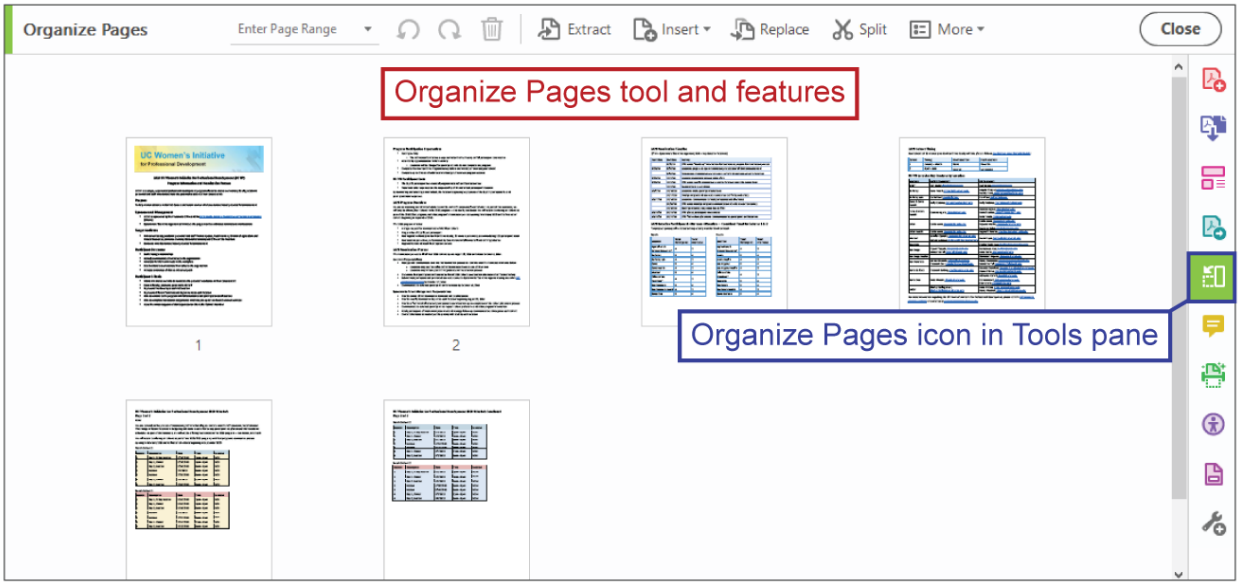
Both of these autotag methods should produce the same outcome, but that outcome could be flawed; the autotagging process may not correctly tag all content segments, so its output should always be reviewed and if necessary, manually edited. Additionally… (see next section: Autotagging a PDF May Trigger Reading Order Tool Inconsistencies)

Autotagging can only be applied to a full document and will overwrite any tags already in the document. If you ever need to autotag certain pages within a document while preserving the tags on the other pages, consider this method:

1. Save the document you're working on
2. Create a separate instance of that document[77]
3. Open that new instance

[77] Such as through Save As or by copy/pasting the document in your file browser

4. Use Adobe Acrobat Pro's Organize Pages tool to delete the pages containing the tags you want to preserve[78]



5. Autotag the new instance
6. Save the new instance
7. Open the original document you were working on
8. Use the Organize Pages tool to add the pages from the new instance into the original document, where they belong in the page order

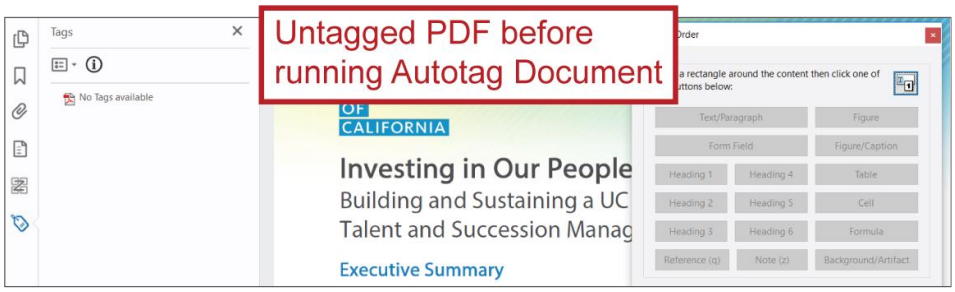
Return to:

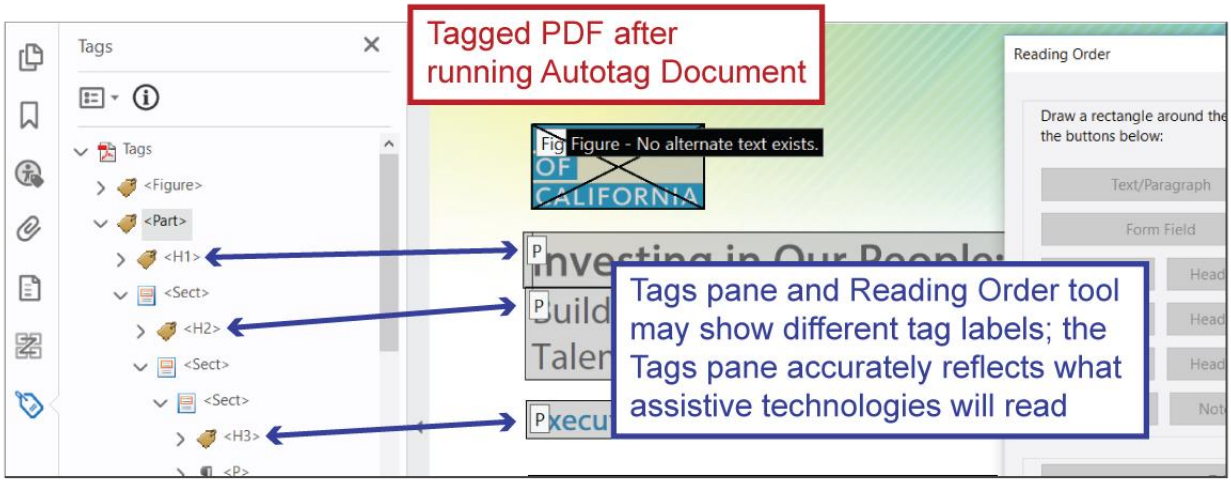
- Item #4. Tagged PDF < PDF Remediation Checklist

[78] Alternatively, you can skip steps 1-3 and just use the Organize Pages tool's Extract feature to create a separate instance of the pages you want to autotag.

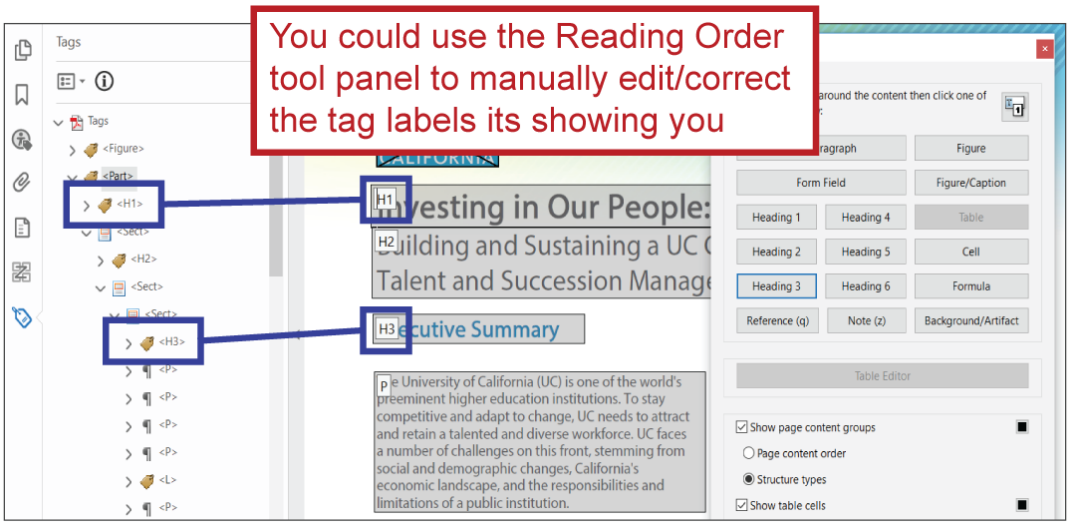
Autotagging a PDF May Trigger Reading Order Tool Inconsistencies

The Reading Order tool won't always display the correct tag labels (see: Tags Pane/Reading Order Tool Differences), and this can sometimes be triggered by autotagging a PDF. For example:





In such cases, the tag labels viewed through the Reading Order tool won't match the tag information available through the Tags pane[79]; you have the option of using the Reading Order tool panel to correct the tag labels that the Reading Order tool is showing you (see: Editing Tag Structure Through Reading Order), or you can leave them be, as they ultimately won't affect how assistive technologies interpret the document.



Manually Adding and Editing Tags in Adobe Acrobat Pro

There are multiple ways to manually add and edit tags through Adobe Acrobat Pro. See:

- **Tags Pane** (generally more reliable than the Reading Order tool)
  - Editing Tags Through the Tags Pane
    - Adjust Tag/Reading Order Through the Tags Pane
    - Editing Tag Structure Type Through the Tags Pane
    - Editing Tag Organization Through the Tags Pane
  - Adding Tags Through the Tags Pane
    - Adding a Tag Container (i.e., a Tag Without Content)
    - Adding Existing Tag Contents to a Tag Container (i.e., Moving Tag Contents)
    - Adding New Tag Contents Through Find Element
      - Creating a <Link – OBJR> Tag Through Find Element
    - Create Tag From Selection: Tag, Re-tag or Add to Tag
  - Change Tag to Artifact ("Artifacting") Through the Tags Pane

[79] Which is the tags information assistive technologies actually interpret.

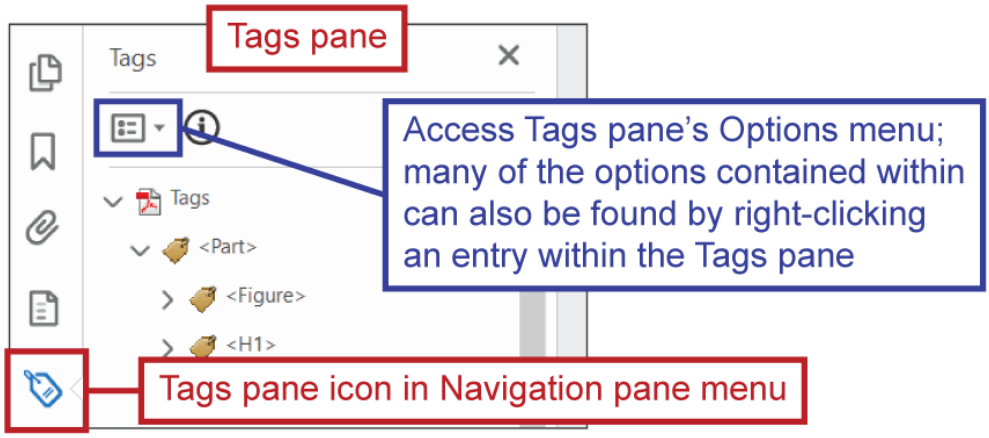
- **Reading Order Tool** (when working properly, offers more user-friendly means of doing certain things)
    - Tagging Content (Adding Tags) Through the Reading Order Tool
    - Editing Tag Structure Type Through the Reading Order Tool

Return to:

- Item #10b. Repeated Header/Footer Content < Start in Word Checklist
- Item #4. Tagged PDF < PDF Remediation Checklist
- Item #22. Tags Re-check < PDF Remediation Checklist

Tags Pane

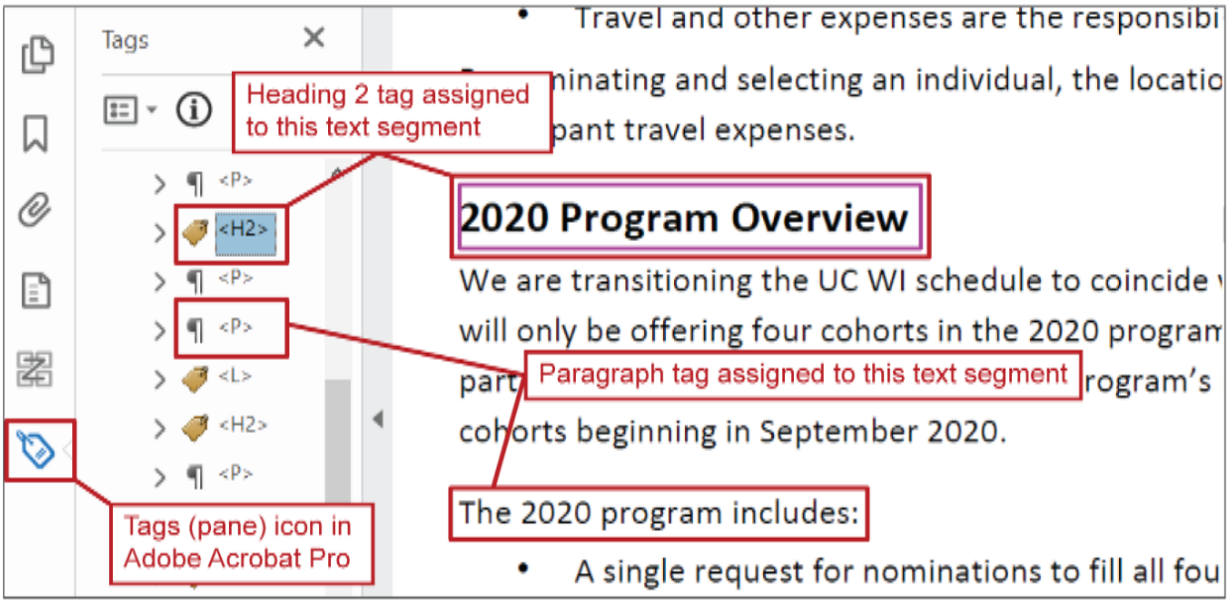
Tags are displayed and editable through the Tags pane, which is one of Adobe Acrobat Pro's Navigation panes.



Tags Pane and Reading Order[80]

The order of the tags within the Tags pane determines the order in which content will be read by assistive technologies; a higher tag will be read before a lower tag[81]. (See Logical Reading Order to understand why this is important.)

For example, in the following screen shot "2020 Program Overview" will be read before "The 2020 program includes" not because the former is higher up on the PDF's page but because its tag occurs earlier in the tag order.



Return to:

- Item #4. Tagged PDF < PDF Remediation Checklist
- Item #5. Logical Reading Order < PDF Remediation Checklist
- Item #20. Reflow Order < PDF Remediation Checklist

Adjust Tag/Reading Order Through the Tags Pane

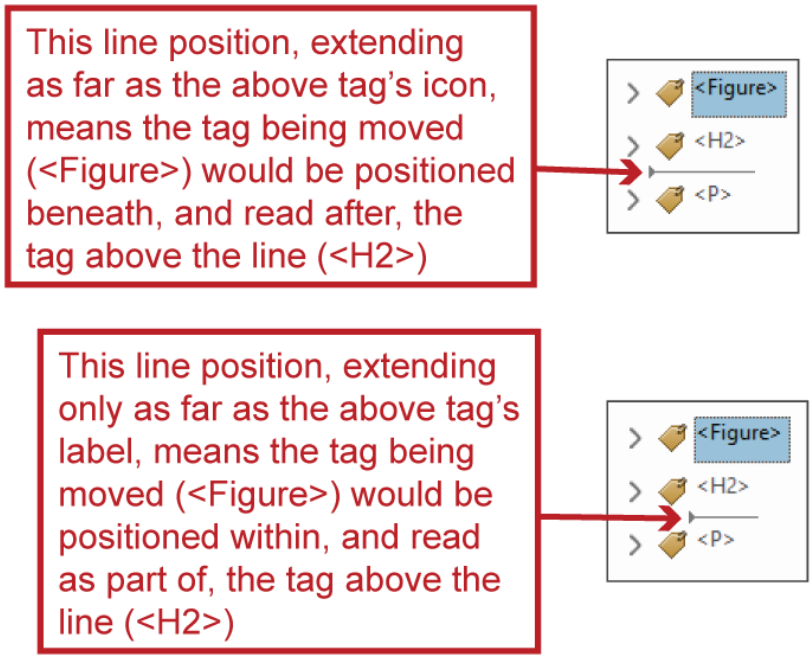
You can adjust the order of tags within the Tags pane — which in turn changes the order in which those tags will be read by assistive technologies — simply by selecting and dragging tags to different positions within the pane. Move a tag higher within the pane and it will be read earlier; move a tag lower and it will be read later.

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[80] Unless "tool" and/or "panel" are including after "Reading Order" (e.g., "Reading Order tool" or "Reading Order tool panel"), the phrase "reading order" refers to the order in which assistive technologies read content.

[81] This same rule applies to tags and tag contents nested within tags: higher tags/contents will be read before lower tags/contents.

However, it's important to note: when moving a tag, be aware of the position of the line you'll see relative to the tag above the line. If the line extends as far as the above tag's icon, that means the tag you're moving would be positioned *beneath* the above tag and read *after* it; but if the line extends only as far as the above tag's label, that means the tag you're moving would be positioned *inside* the above tag and be read *as part of* it, which could throw off the structure and reading order if done unintentionally (see Editing Tag Organization Through the Tags Pane to learn more about why one would intentionally move a tag or tag components inside another tag).



Return to:

- Item #5. Logical Reading Order < PDF Remediation Checklist
- Item #23. Logical Reading Order Re-check < PDF Remediation Checklist

Tags Pane, Reading Order Tool Differences

The Tags pane and Reading Order tool both provide means of viewing and editing tags, but there are important differences between the two you need to understand:

- Sometimes, the tags the Reading Order tool shows you are not accurate
  - The Reading Order tool may display all content as having a P tag or a Span tag
  - Or it may include more content in a tag than is actually in the tag
- Sometimes, attempts to add or change tags through the Reading Order tool don't work

Ultimately, it is the tag information in the Tags pane that determines what assistive technologies read, and the Tags pane provides the most reliable means of viewing and editing that information

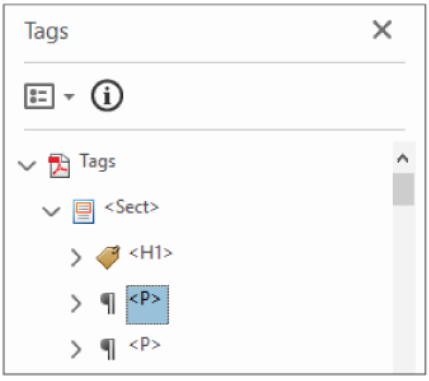
However, it is worth noting that (when it is working properly) the Reading Order tool provides what many find to be a superior and more user-friendly means for tagging content, so if you need to do that, it's recommended you first try using the Reading Order tool.

Editing Tag Structure Type Through the Tags Pane

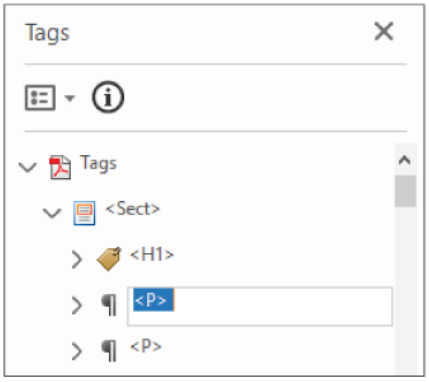
There are multiple ways of editing tag structure type through the Tags pane.

If you know the shorthand label of the tag structure type you want to change a tag to (e.g., P for paragraph/body text, H1 for Heading 1, H2 for Heading 2, etc.):

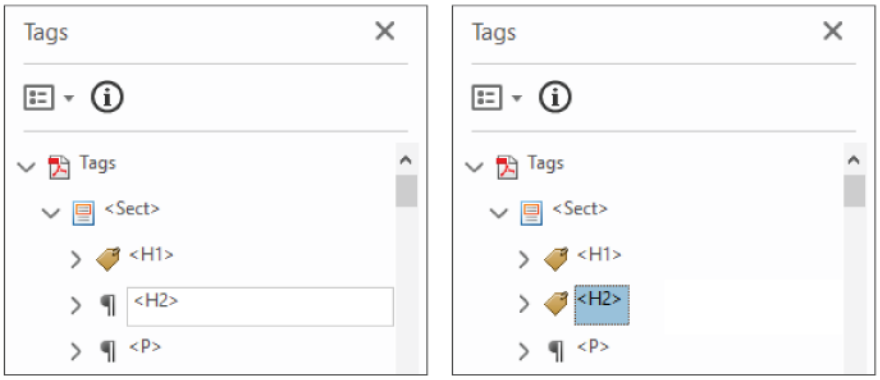
1. Select the tag in the Tags pane



2. Click the tag once more so that its shorthand label becomes editable

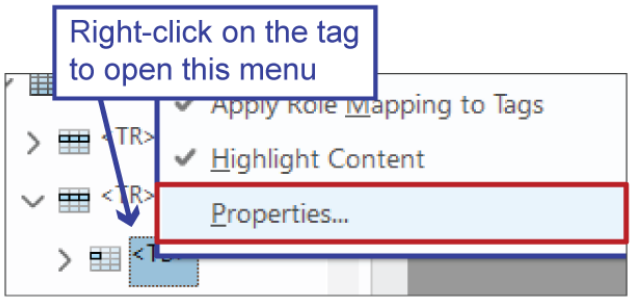


3. Type the desired tag shorthand label between the angle brackets and then click outside the tag

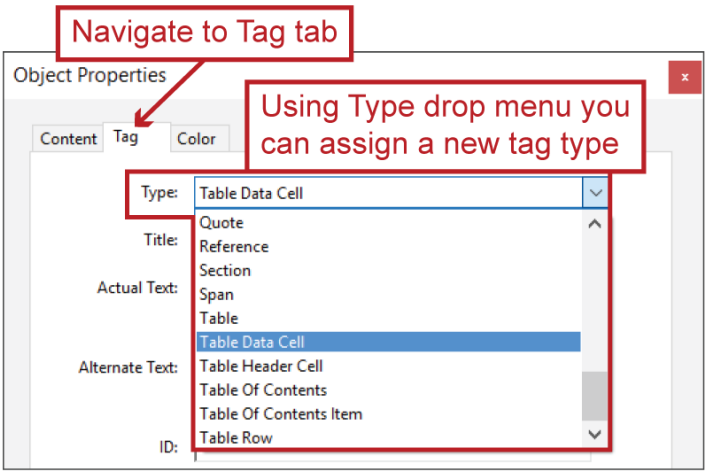


You can also adjust tag structure type through the Object Properties panel:

1. Right-click a tag within the Tags pane
2. In the resulting menu, select Properties; this will open the Object Properties panel



3. The Object Properties panel should open with the Tag tab displayed, but if not, navigate to it
4. In the Type drop menu, you can choose a new tag structure type

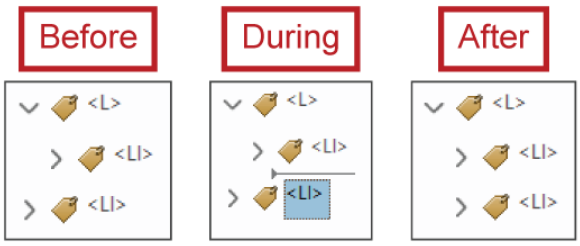


Return to:

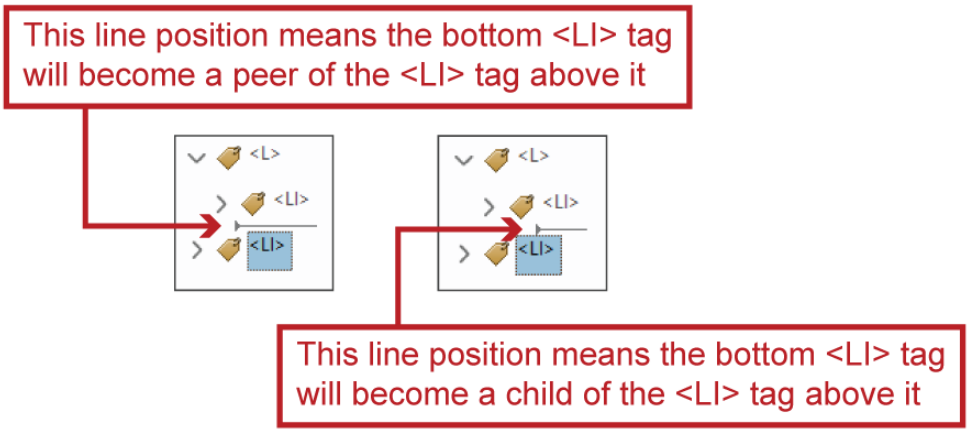
- Item #18. Appropriate Nesting < PDF Remediation Checklist

Editing Tag Organization Through the Tags Pane

You can edit tag organization through the Tags pane by selecting and dragging tags and/or tag components to different positions within the pane. For example, you could add a list item to a list by dragging the list item's tag within the list's tag.



When editing tag organization, make sure to note the position of the line you'll see when you select and drag a tag, or tag component, relative to the tag above it; if the line extends as far as the above tag's icon, were you to release the selected tag, it would become a peer of the tag above it; if the line extends only as far as the above tag's label, were you to release the selected tag, it would become a child of the tag above. You may have to make subtle adjustments with your mouse to achieve the correct positioning before you release the selected tag.



Return to:

- Item #16. List Items, and Lbl and LBody < PDF Remediation Checklist
- Item #17. Manual List and List Item Tag Check < PDF Remediation Checklist

Adding Tags Through the Tags Pane

You can add tags through the Tags pane. It's not as straightforward as tagging content through the Reading Order tool, but it does offer some unique advantages, such as the ability to tag certain types of content — like links (see: Adding New Tag Contents Through Find Element) — that cannot be tagged through the Reading Order tool.

See sub-sections:

- Adding a Tag Container (i.e., a Tag Without Content)
- Adding Existing Tag Contents to a Tag Container
- Adding New Tag Contents Through Find Element
    - Create a <Link – OBJR> Tag Through Find Element

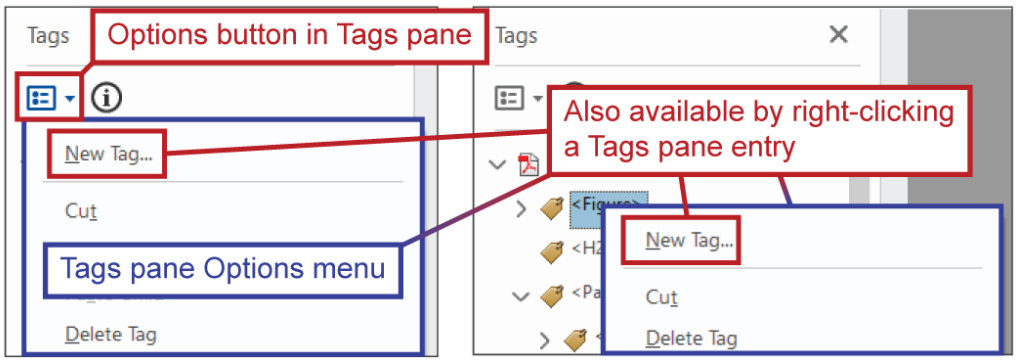
See also:

- Create Tag From Selection: Tag, Re-tag or Add Tag

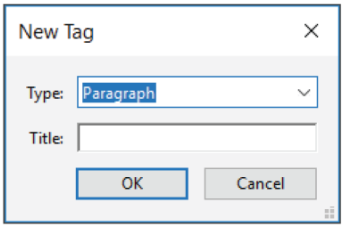
Adding a Tag Container (i.e., a Tag Without Content)

To add a new tag container to the Tags pane:

1. Click the Tags pane's Options button (or right-click an entry in the Tags pane) and choose New Tag



    a. The new tag will be added beneath whatever tag was selected at the time; if no tag was selected, the new tag will be added at the bottom of the tag order
2. In the resulting New Tag panel, assign the new tag's structure type and click OK



    a. Type, within the New Tag panel, functions as both a drop menu and a text entry field: you can select a structure type from the Type drop menu; or, if you know the structure type's shorthand label, you can type it directly into the Type field[82]

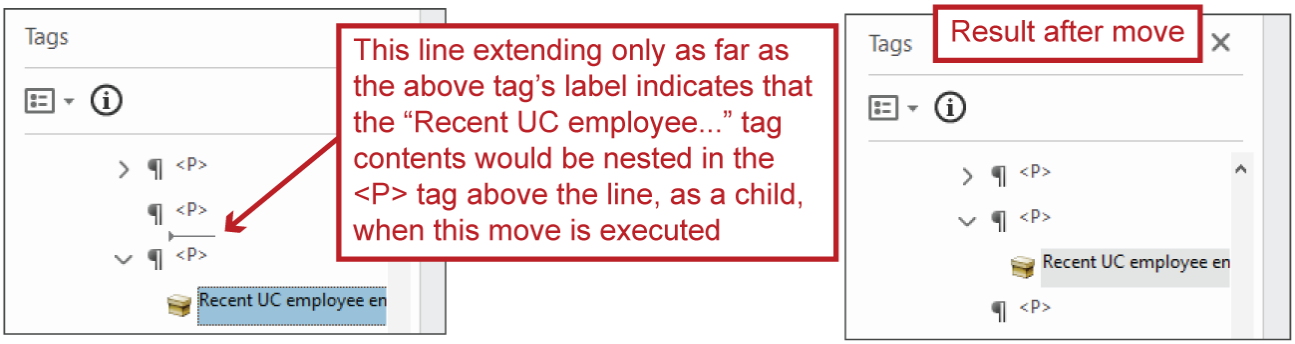
[82] Do not include < > when typing a shorthand label into the Type field

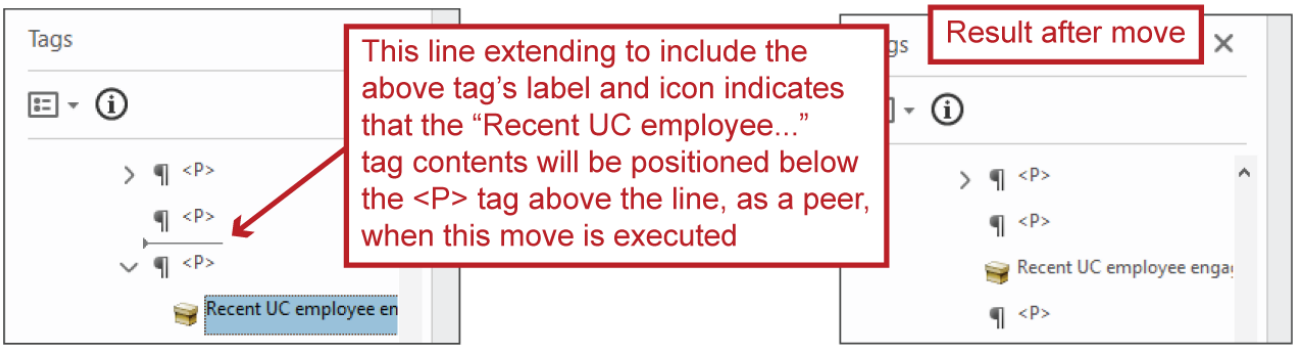
Adding Existing Tag Contents to a Tag Container (i.e., Moving Tag Contents)

You can add existing tag contents to a tag container — i.e., move tag contents from one tag container to another — by finding the tag contents in the Tags pane, selecting it and dragging it to the new container. You can also nest a tag within another tag in this same way.

When moving contents, just make sure to pay attention to the line indicating where the moved contents will be positioned and potentially nested in relation to the above tag:

- If the line extends only as far as the above tag's label, the moved content will be nested within that tag as a child[83]
- If the line extends to include the above tag's label and icon, the moved content will be positioned below the tag as a peer



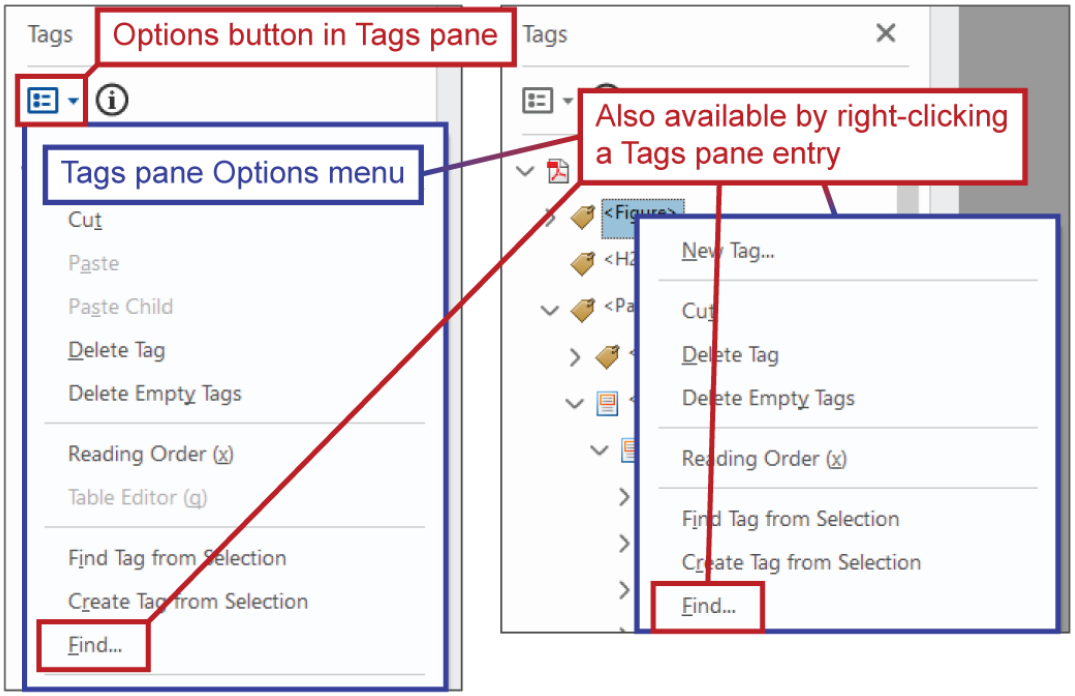


[83] Be especially aware of this indicator, as nesting tags can occasionally result in complications. For example, if you attempt to nest a tag or tag contents in a Link – OBJR tag, the tag or tag contents will disappear and often be very difficult to bring back (in such cases, it may be easiest to revert to a previously saved version of the PDF).

Adding New Tag Contents Through Find Element

The Find Element feature provides a means for tagging previously untagged[84] contents (i.e., for adding new tag contents) and is particularly suited for tagging previously untagged links[85].

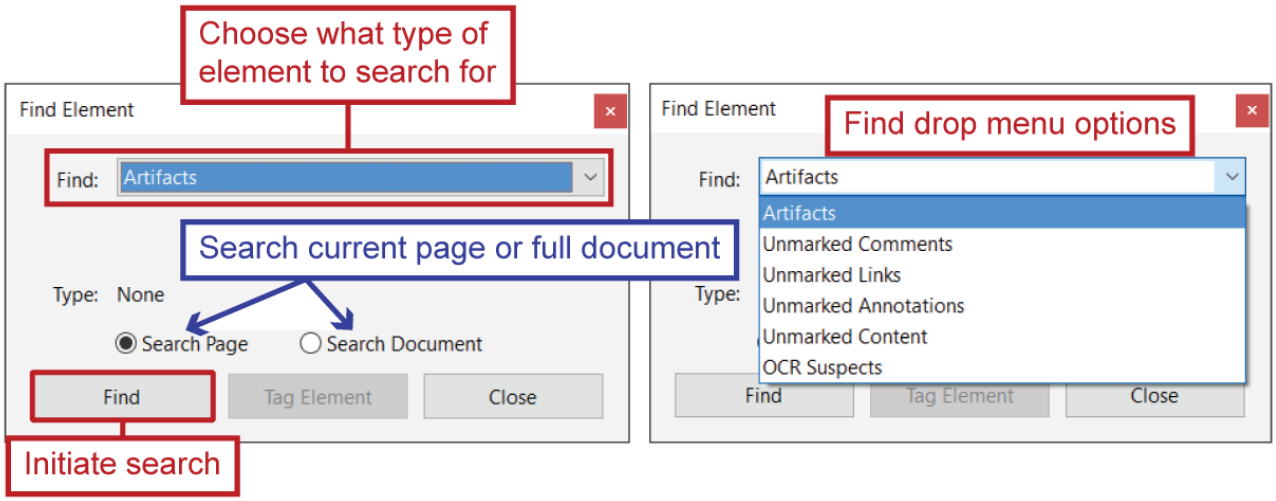
To access this feature, click Find within the Tags pane Options menu (which you can open either by clicking on the pane's Options button or by right-click any entry in the Tags pane).



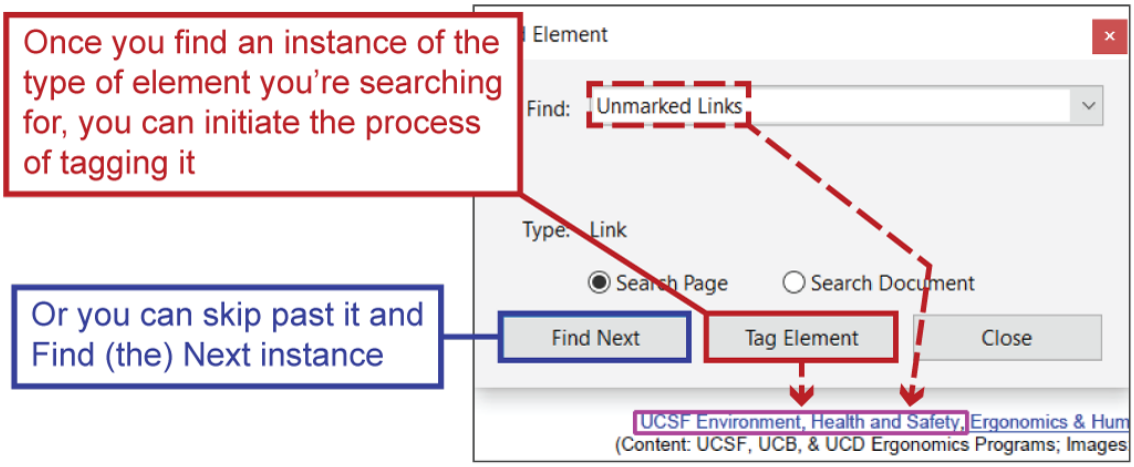
[84] Adobe Acrobat Pro will sometimes use the term "unmarked" to describe content that is not yet tagged.

[85] I.e., links that are clickable for mouse users but are not accessible to assistive technology users.

In the Find Elements panel, you can use the Find drop menu to choose the element type for which you'll search. Initiate a search, either on the current page or within the entire document, by clicking the Find button.



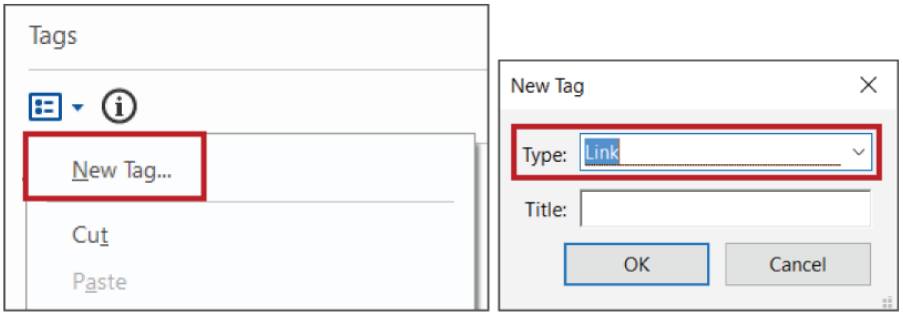
Once you've found an instance of the type of element you're searching for, you can begin the process of tagging it by clicking the Tag Element button. Or, click the Find Next button to search out the next instance of that type of element.



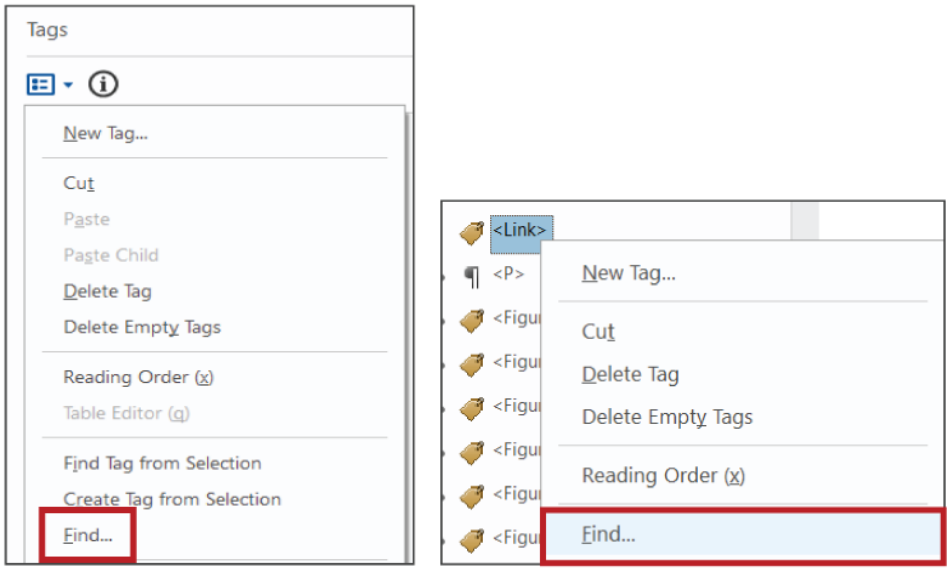
Creating a <Link – OBJR> Tag Through Find Element

A Link – OBJR tag is a key component of an accessible link in a PDF and can be generated through Find Element. To do so:

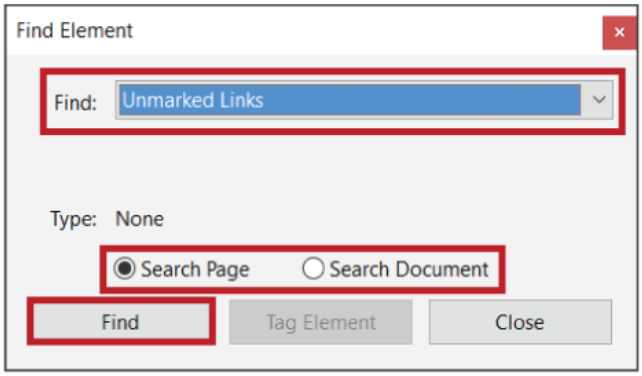
- If you do not already have a <Link> tag to host the Link – OBJR tag, create one by clicking New Tag in the Tags pane's Options menu and setting the new tag type to Link



1. Open the Tags pane's Options menu — either by clicking the Options button or by right-clicking the link tag that will host the Link – OBJR tag — and select Find

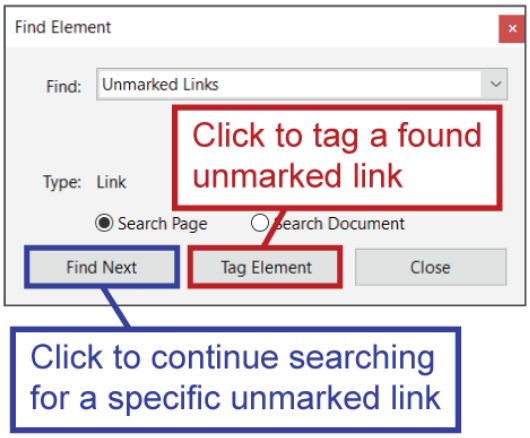


2. In the Find Element panel, set the Find type to Unmarked Links, adjust the Search Page/Search Document setting if necessary and click the Find button



   a. If the specific unmarked link you're searching for is not immediately found, click the Find Next button until it is

3. Once the specific unmarked link you're searching for has been found, click the Tag Element button



   a. A Link – OBJR tag will be created, either nested within the tag you had selected when you initiated the process or at the bottom of the tag order



4. Once the Link – OBJR tag has been created, you'll need to organize it and the other link components together in a way that allows it to be properly interpreted by assistive technologies (see: Accessible Links in PDFs)

Create Tag From Selection: Tag, Re-tag or Add to Tag

The Tags pane's Create Tag from Selection option allows you to tag, re-tag or add to an existing tag content that you've selected[86]. To use it:

1. Select content using either the Selection tool or the Reading Order tool's selection capability



2. If you want to…
    a. Add the selected content to an existing tag, select that tag (container) within the Tags pane
    b. Create a new tag or re-tag content to change its structure type, select the tags root within the Tags pane



3. Open the Tags pane Options menu
4. Choose Create Tag from Selection
5. If you are creating a new tag or re-tagging content to change its structure/type, you will need to choose the new structure type and then click OK

Change Tag to Artifact ("Artifacting") Through the Tags Pane

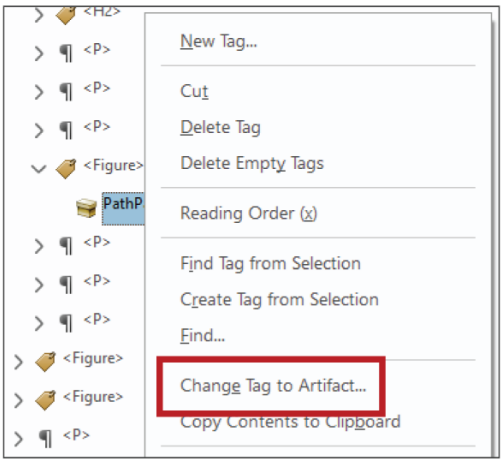
To change a tag to an artifact:

1. In the Tags pane, locate the tag and expand it so its contents are visible

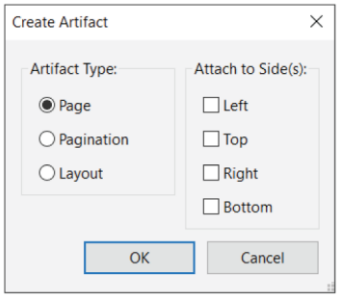


[86] There are arguably better ways of doing everything Create Tag from Selection does, such as using the Reading Order tool, but it's a good tool to keep in mind in case one of those other methods fails (or refuses) to work properly, which can happen.

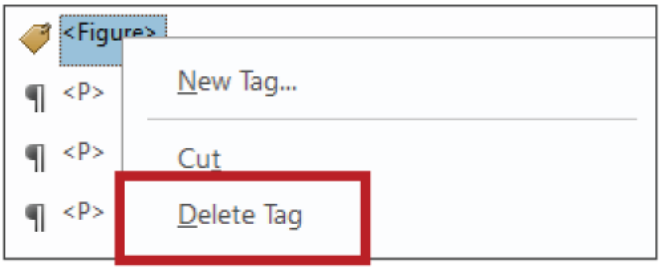
2. Right-click the tag contents and select Change Tag to Artifact



3. In the Create Artifact panel, set the Artifact Type and click OK
    a. Use the Page or Layout type for in-page elements
    b. Use the Pagination type for Header/Footer elements
    c. You can ignore, and leave unselected, the Attach to Slide(s) options



4. The tag contents will disappear, leaving an empty tag container that you should then delete



See also:

- Turning Content into an Artifact (“Artifacting”) Through the Content Pane
- Tag Content as Artifact Through Reading Order
- Set Alternate Text, Decorative Figure — a method similar to artifacting that should be used with caution, if at all

Additional Tags Pane Features That May Help with Remediation

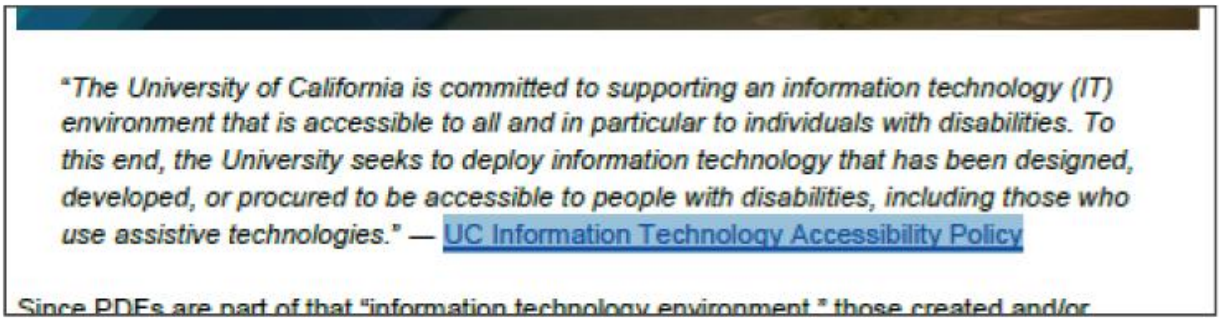
Highlight Content

If the Highlight Content setting is selected, then selecting an entry within the Tags pane will cause the corresponding content to be highlighted within the PDF.

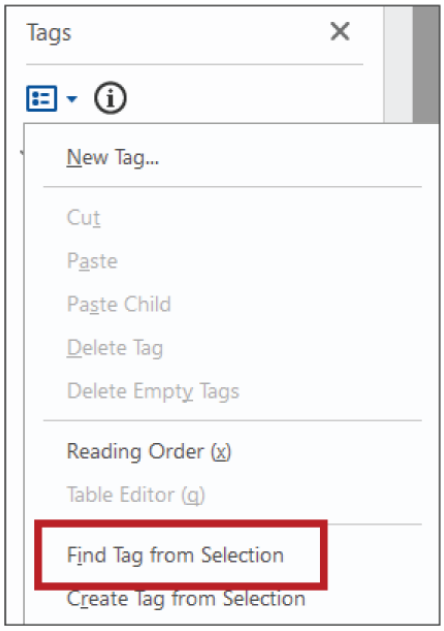
Find Tag from Selection

The Find Tag from Selection feature can help you locate specific tags within the Tags pane. To use it:

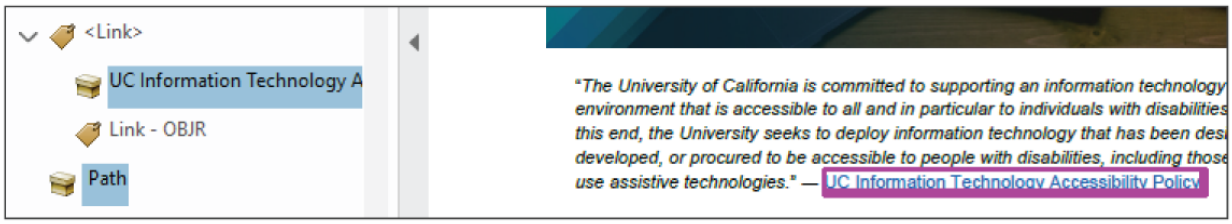
1. Select/highlight within the PDF the specific bit of content whose tag you want to locate within the Tags pane



2. Open the Tags pane's Options menu and select Find Tag from Selection



The corresponding tag will then be highlighted within the Tags pane.



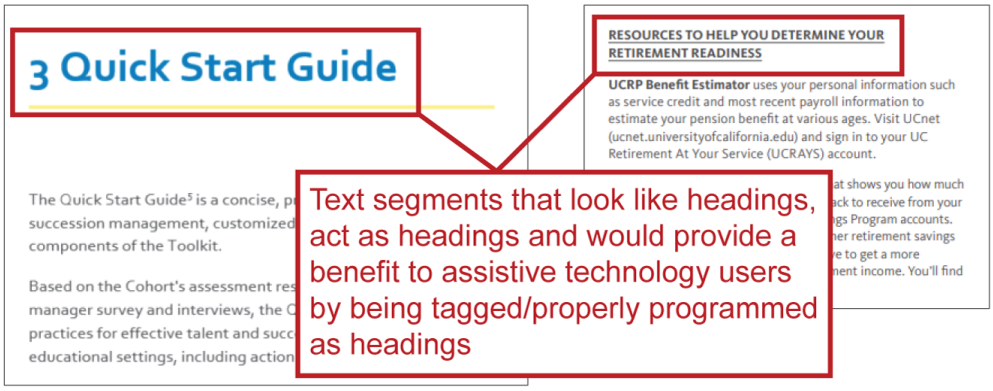
Text That Looks Like and Acts as Headings

The text above is an example of text that looks like a heading: it's larger than this text, which is Normal/body text, and a different color; it also has the bold font property.

The aforementioned text above also acts as a heading: it introduces and labels a distinct section of content.

Text that a) is styled to look like a heading, and b) acts as a heading, should be tagged as a heading so that assistive technology users can also recognize it as a heading and benefit from that (see: Structure).

Here are two more examples from other documents of text that looks and acts like headings.



Return to:

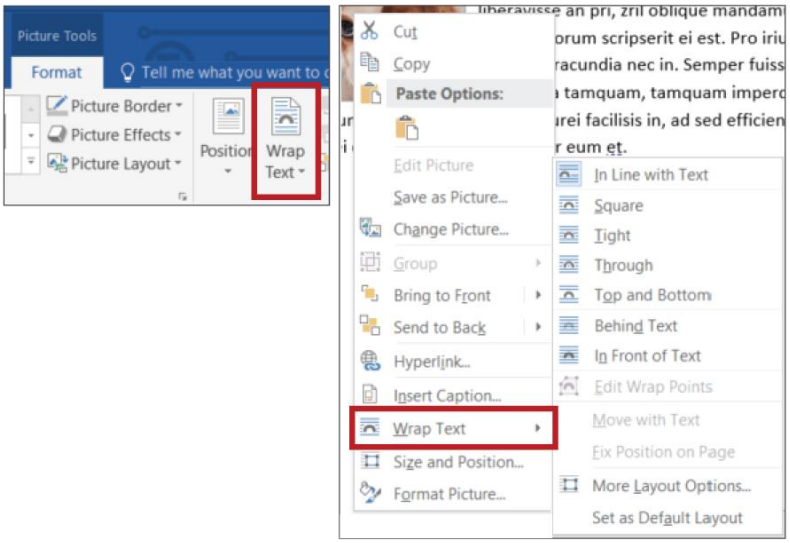
- Item #1a. Text That Looks Like Headings < Start in Word Checklist

Text Wrapping

Text wrapping is a feature within Microsoft Word that allows you to wrap text around images and other graphic elements, as seen in the screen shot example below.



This feature goes by a few different names in Word. You might see it as Layout Options (as seen in the screen shot above). If you select an image and open the Picture Tools Format ribbon, you'll see it as Wrap Text; same for if you right-click on an image.



Return to:

- Item #4b. Text Wrapping < Start in Word Checklist

Text Wrapping and Accessibility

Text Wrapping and Accessibility Within Word

In Line with Text is the only text wrapping setting that allows an image/graphic to be read by assistive technologies *within* Word (it is also the default text wrapping setting within Word). If you give an image/graphic any other text wrapping setting (e.g., Tight, Behind Text, etc.), assistive technologies won't be able to recognize or read it within the Word document.

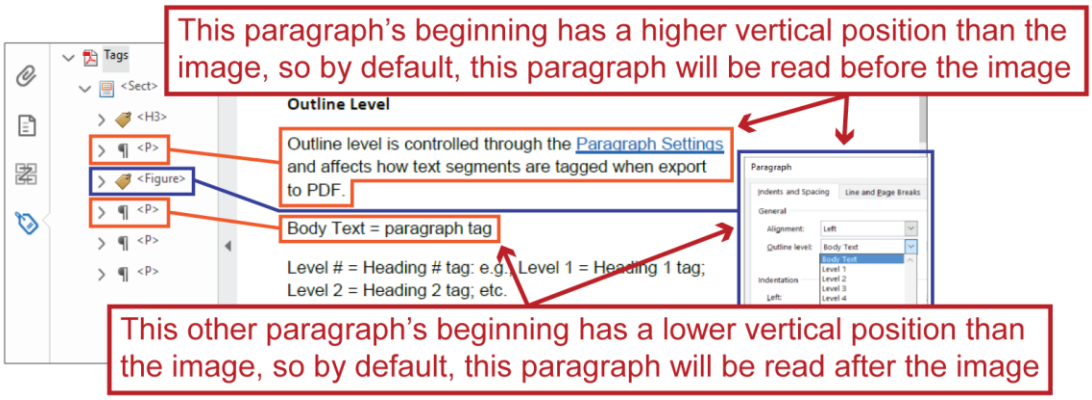
Return to:

- Item #4b. Text Wrapping < Start in Word Checklist

Text Wrapping and Accessibility When Exported to PDF

An image/graphic's specific text wrapping setting within Word will not affect whether assistive technologies can read the image/graphic in an exported PDF, nor will it affect the order in which the image/graphic will be read; regardless of their text wrapping setting in Word, all image/graphics exported from Word to PDF will be:

- Tagged as Figures and recognizable to assistive technologies
- Positioned within the reading order / tag order based on their vertical position on the page relative to that of other elements
    - Vertical position is determined by an element's upper boundary
    - E.g., an image would be read: after any paragraph that begins before its upper boundary; and before any paragraph that begins after its upper boundary



However, an image/graphic's text wrapping setting within Word will affect its default position within the Reflow order. Specifically:

- Image/graphics with the In Line with Text setting will be ordered before image/graphics that have any other text wrapping setting
- All image/graphics, regardless of their text wrapping setting within Word, will be ordered after in-line text (see: Default Reflow Order when Exporting from Word to PDF).

Return to:

- Item #4b. Text Wrapping < Start in Word Checklist