# LOGICAL READING ORDER IN PDF & WEBAIM COLOR CONTRAST CHECKER

## INTRODUCTION

A logical reading order is essential for accessibility because it helps screen readers present information in a coherent way, allowing users to follow the text's flow and understand relationships. It reduces cognitive load for all users, making it easier to process information. A clear structure, with headings and lists, aids visual comprehension and skimming. Keyboard users benefit from seamless navigation without losing context. Using proper HTML elements enhances the meaning and helps assistive technologies interpret content accurately. Ultimately, a logical reading order improves usability and inclusivity for all users.

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# Setting Up the Document Properties

There are three parts to setting the basic document properites:

1. Setting the Document Title
2. Setting PDF Metadata to Use the Document Title
3. Setting the Language in PDF

Performing these steps first when opening any PDF document will help resolve the most common errors before you start the remediation process.

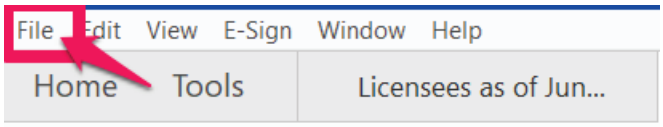
## Document Title

### Setting the Document Title

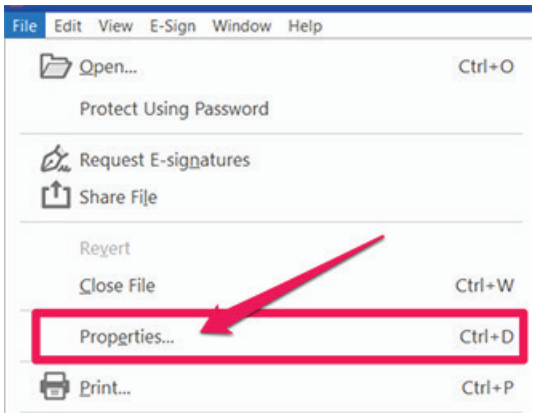
First check if the document has a document title. If it doesn't add the title. If the source document (such as Word, Excel, or PowerPoint) includes a title, the PDF will typically carry it over. Otherwise, you will need to add a title to the PDF. Follow the steps below to determine if the document title has been set properly.

#### Older Versions of Adobe Acrobat

1. Click on "File" at the top of the menu bar.



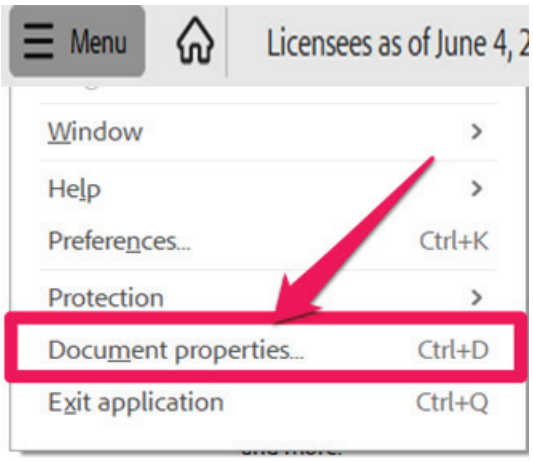

2. Select "Properties" to open the Document Properties window.



## Newer Versions of Adobe Acrobat

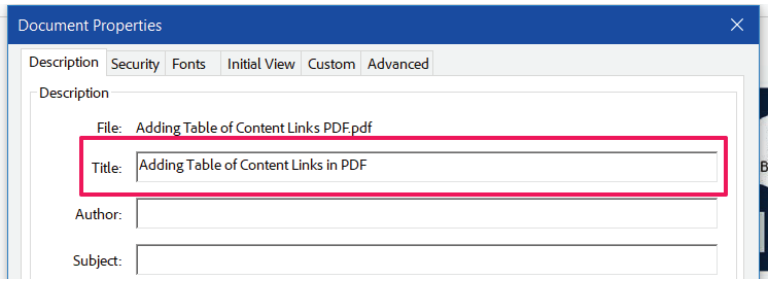
1. Click on "Menu" at the top left of the window.

2. Select "Document Properties" to open the Document Properties window.




3. View the Description tab to determine if the document has a title and/or if the title is an appropriate description of the document. If the title is accurate, proceed to next section. If the title is not there or is not accurate, proceed to step 4.

**Note: Steps 3 and 4 are the same in both older and newer versions of Adobe Acrobat**



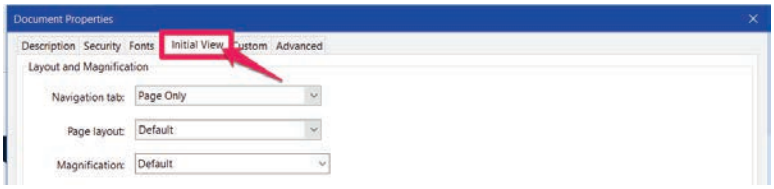

4. If there is no title, or if the title does not provide an accurate description of the document click in the Title field and select any text in it. Type in the new accurate document title.

# Setting PDF Metadata to Use the Document Title

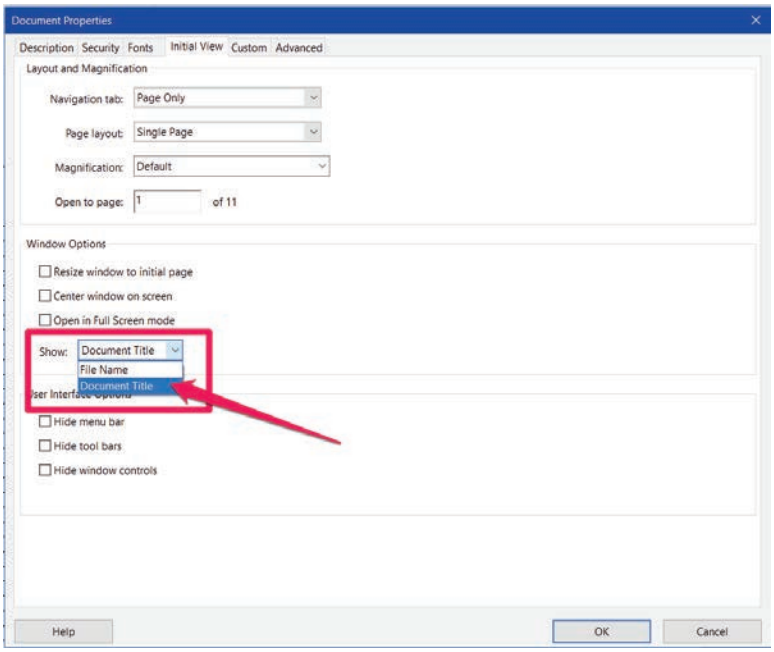
When adding a title to the document, the metadata must be updated to reflect the new document title instead of the file name.

**Note: These steps are the same in both older and newer versions of Adobe Acrobat.**

1. Make sure you are still in the Document Properties. See last section for guidance.
2. Click on the “Initial View” tab.




3. If the “Show” dropdown menu is set to “File Name” change this to “Document Title”



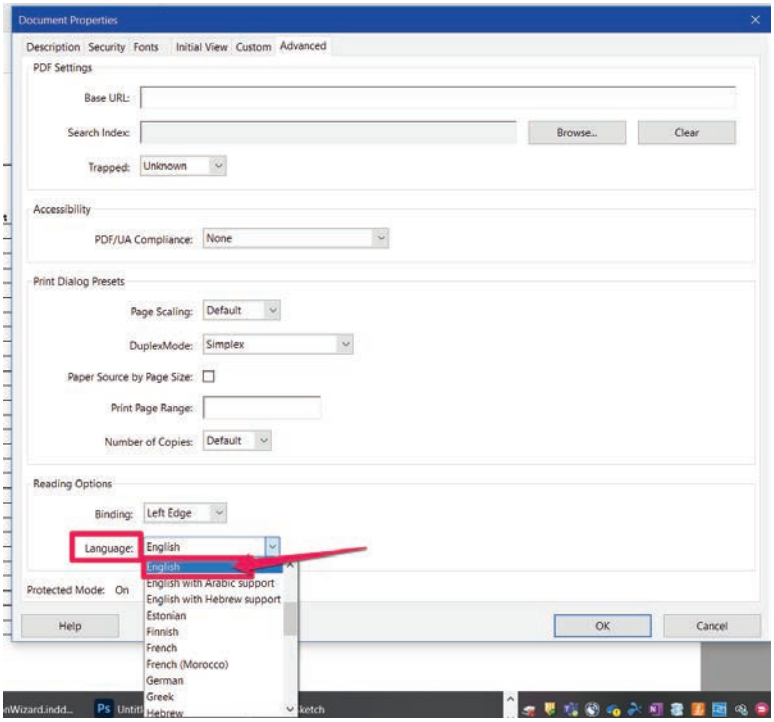
# Setting the Language in PDF

Screen reader technology will read the document to the user in the language set for the document. A document can only have one language setting. The steps to set the correct language in a PDF are:

**Note: These steps are the same in both older and newer versions of Adobe Acrobat.**

1. Click on the “Advanced” tab in the Document Properties window.

2. Choose the “Language dropdown” and change it to the correct language. In this case “English.”



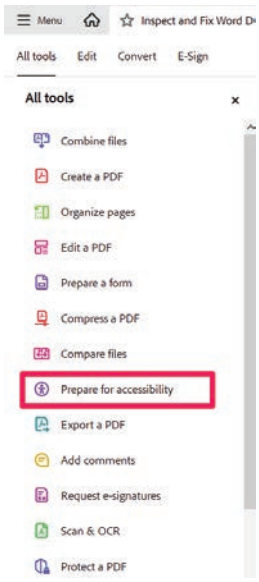

3. Click the “OK button to save any changes to the PDF title or language.

# Full Accessibility Check on Document

## Full Accessibility Check - Newer Versions of Adobe

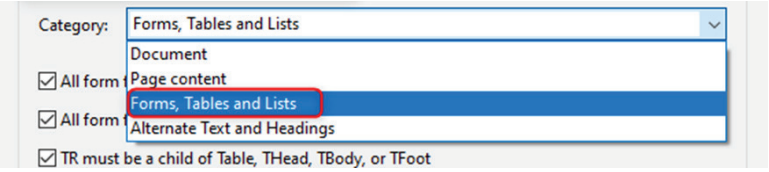
The first step is to conduct a comprehensive (full) Accessibility Check to identify any errors that need to be addressed in the Content Tool in the All Tools Menu on the left. This menu is displayed by default on the left side of the page.

1. Locate the All Tools menu on the left and click the Prepare for accessibility button.

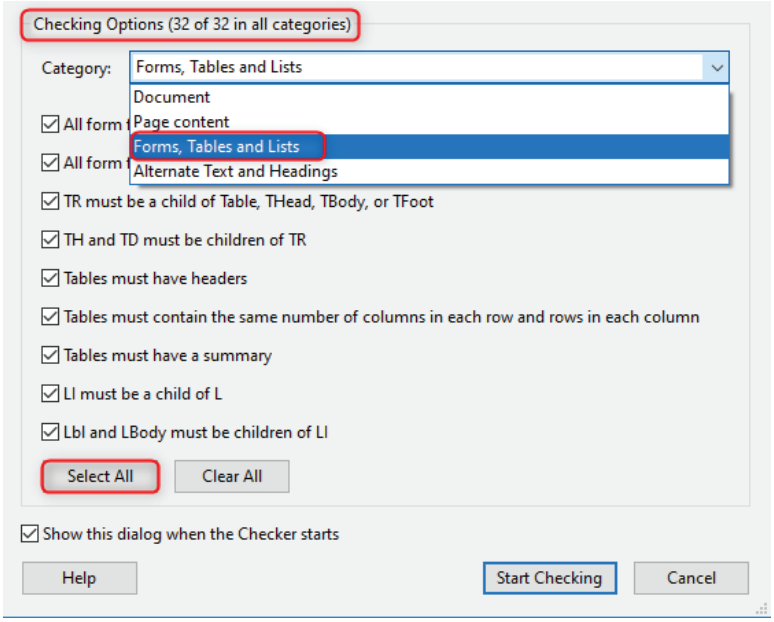



2. Click on Check for accessibility

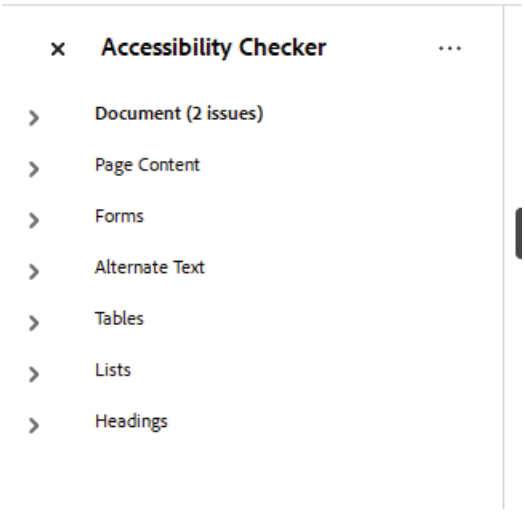
3. Verify that the Category drop-down is set to "Forms, Tables and Lists".




4. In the Accessibility Checker Options dialog box, under Checking Options, verify that it shows (32 of 32 in all categories). Then click on Start Checking.



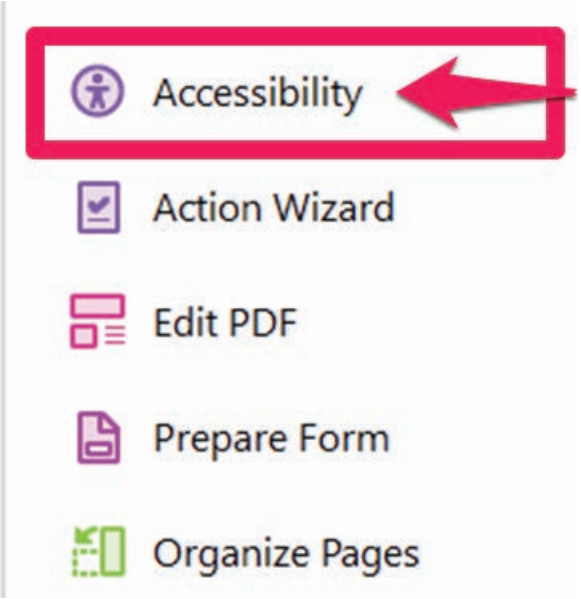

5. The Accessibility Checker panel will appear on the right side of the document. Expand the arrows to see the accessibility issues.



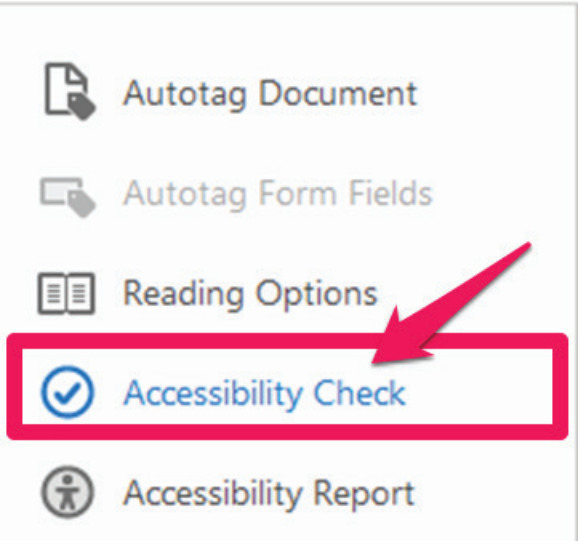
## Full Accessibility Check Older Versions of Adobe Acrobat

The first step is to conduct a comprehensive (full) Accessibility Check to identify any errors that need to be addressed in the Content Tool on the left tool menu.

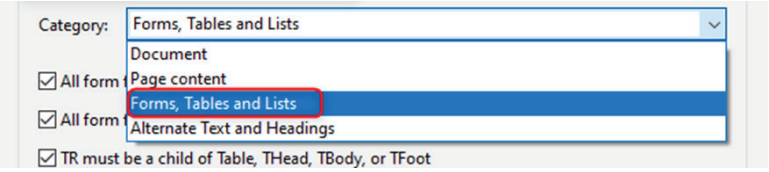
1. Use the Accessibility Tool on the right side of the document tool menu.



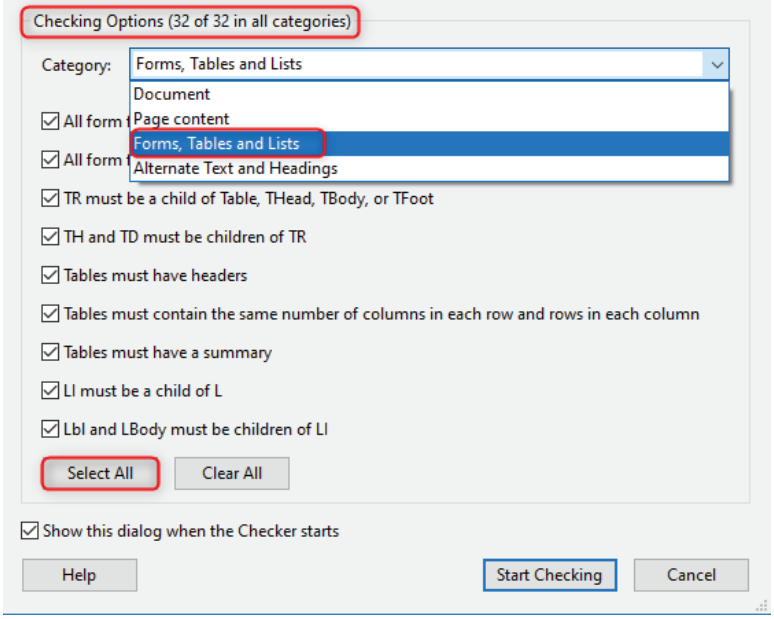

2. Select the Accessibility Check tool in the Accessibility tool to see if there are any errors.



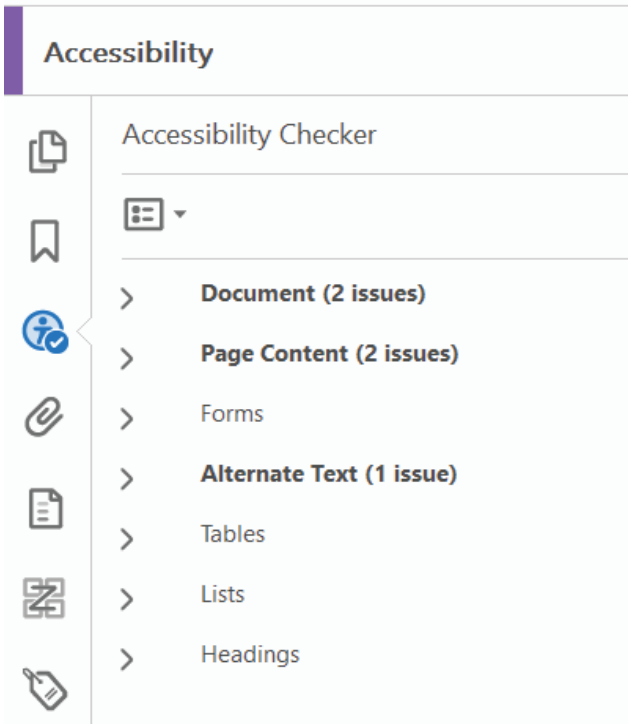
1. Verify that the Category drop-down is set to "Forms, Tables and Lists".




2. In the Accessibility Checker Options dialog box, under Checking Options, verify that it shows (32 of 32 in all categories). Then click on Start Checking.




3. The Accessibility Checker panel will appear on the left side of the document. Expand the arrows to see the accessibility issues.



# Logical Reading Order

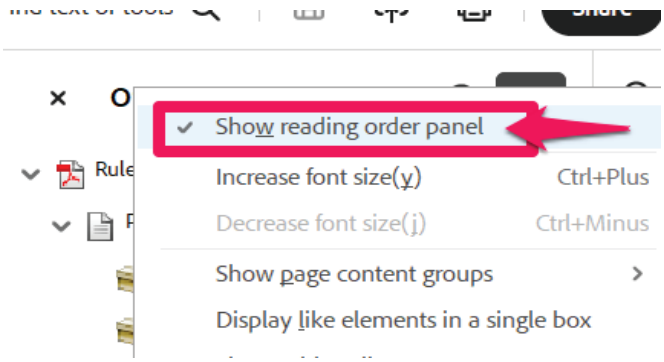
## Logical Reading Order - Newer Versions of Adobe Acrobat

With this problem use the "Reading Order" tool, located on the left side of the Adobe application.

1. Click on "Reading Order" icon on the right side of the screen.

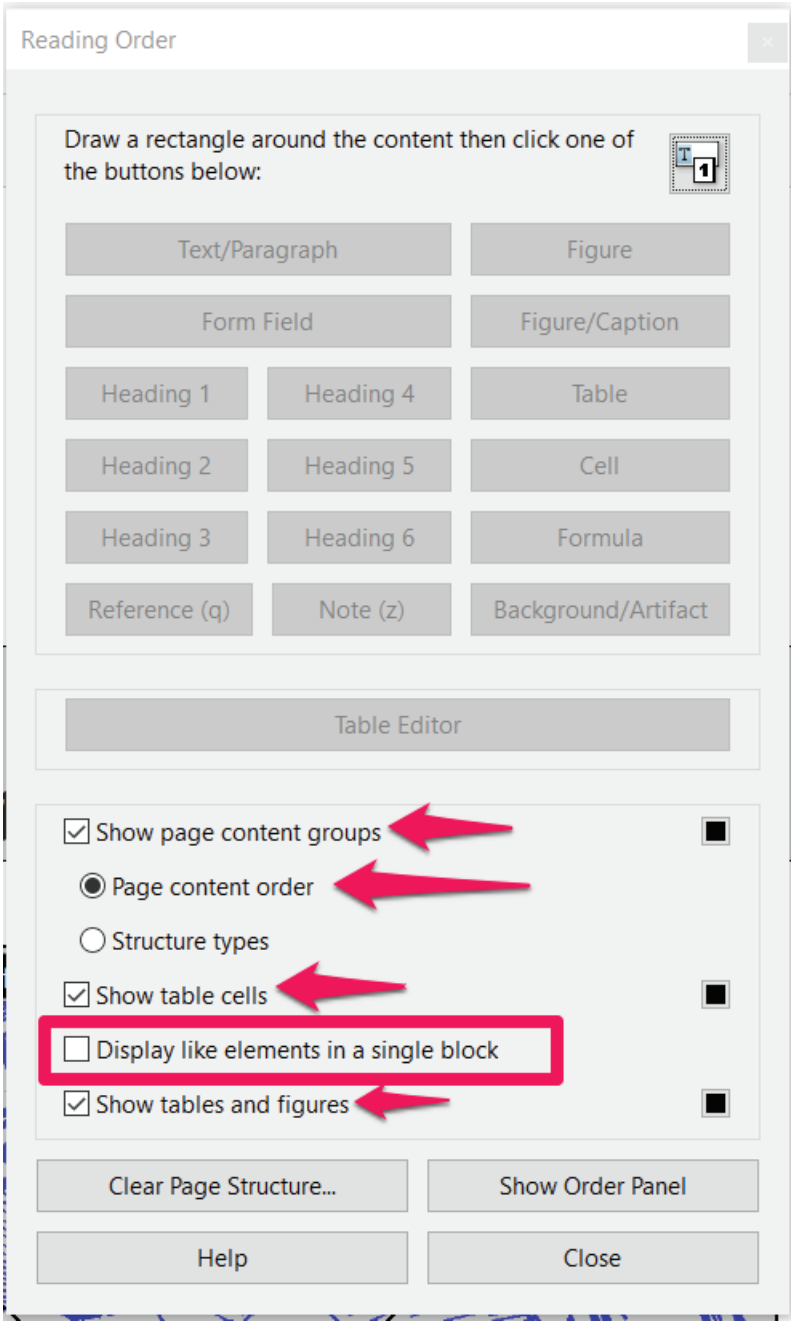
2. In the Reading Order panel, click the horizontal ellipses in the top right corner of the panel.

3. Choose Show reading order panel from the drop-down menu.



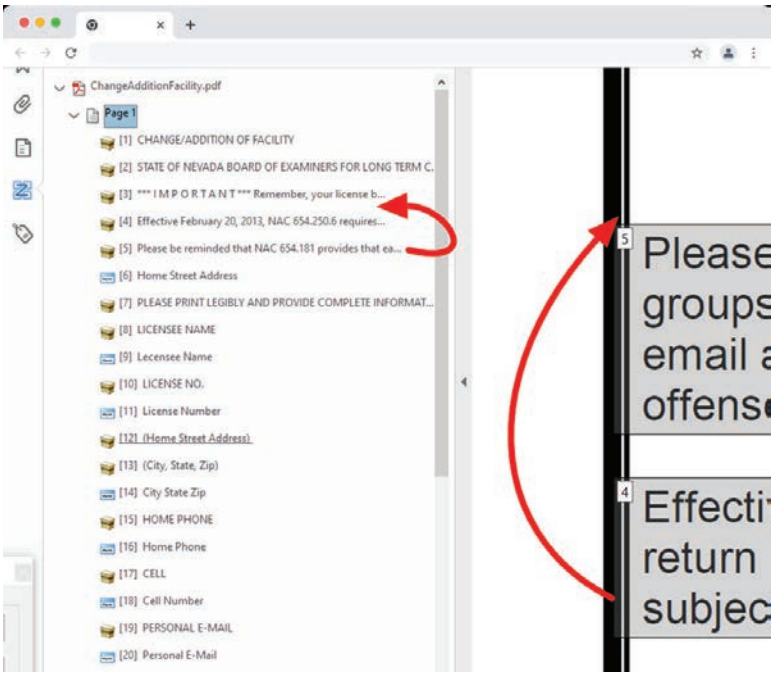
4. In the Reading Order panel, make sure "Page content order", "Show table cells" and "Show tables and figures" are checked and that "Display like elements in a single block" is unchecked.

**Note: If you accidentally check "Display like elements in a single block" everything that is similar will be grouped together and the accessibility checker will be unable to identify the issues.**



5. In the Order panel, click and drag to move the out of order item into the correct position.

   Example: In the image below on the right side of the image you see the paragraph labeled 5 is above the paragraph labeled 4 on the page. It is not in the correct order in the Order panel. Click and drag to move the paragraph beginning with “Please be reminded…” above the current item 4 “Effective February…” to correct the order.




6. Repeat the above steps until the elements in the Order panel match the order of the items on the page. This will give the document the proper reading order and it will be fully accessible.
7. Run a Full Accessibility Check on the document to be sure all issues have been resolved.

## Logical Reading Order - Older Versions of Adobe Acrobat

With this problem use the "Reading Order" tool, located on the left side of the Adobe application.

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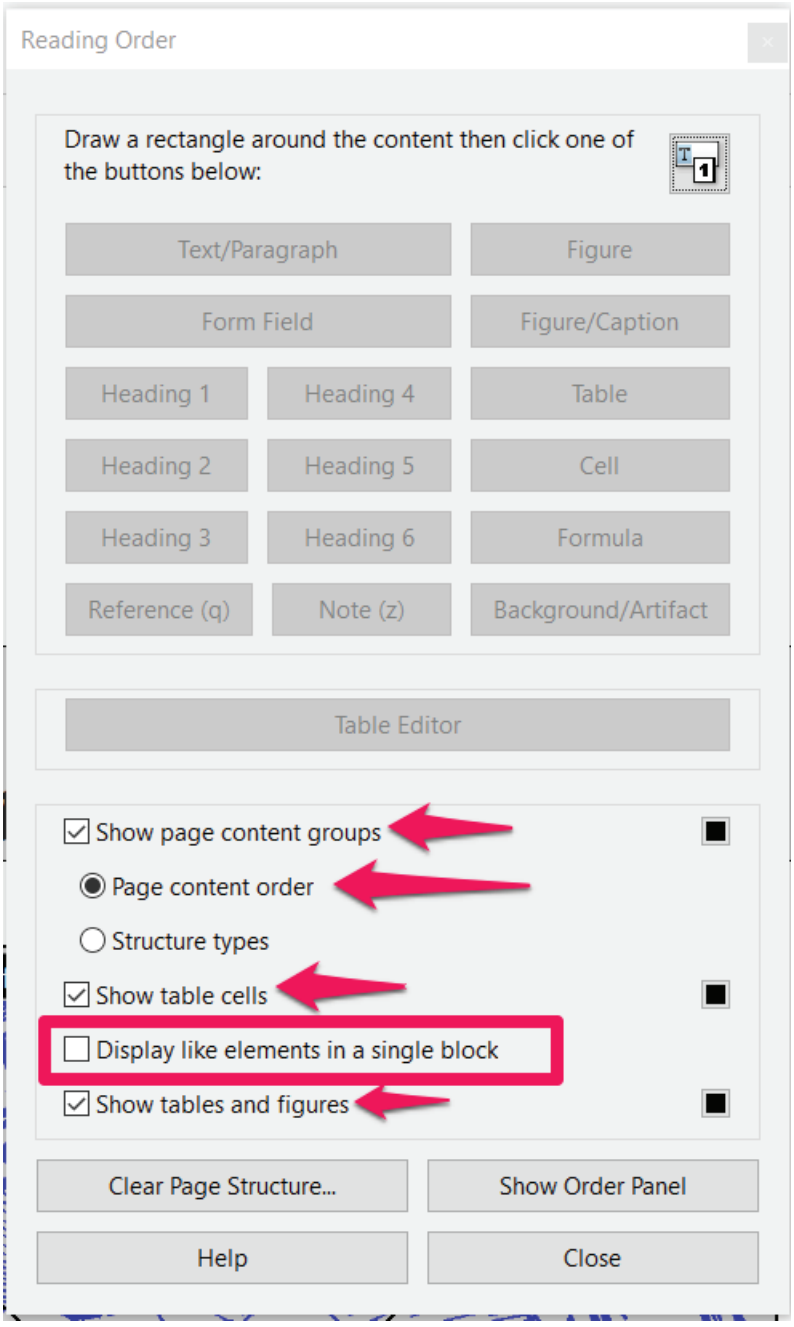
2. In the Reading Order dialog box, make sure "Page content order", "Show table cells" and "Show tables and figures" are checked and that "Display like elements in a single block" is unchecked.

**Note: If you accidentally check "Display like elements in a single block" everything that is similar will be grouped together and the accessibility checker will be unable to identify the issues.**



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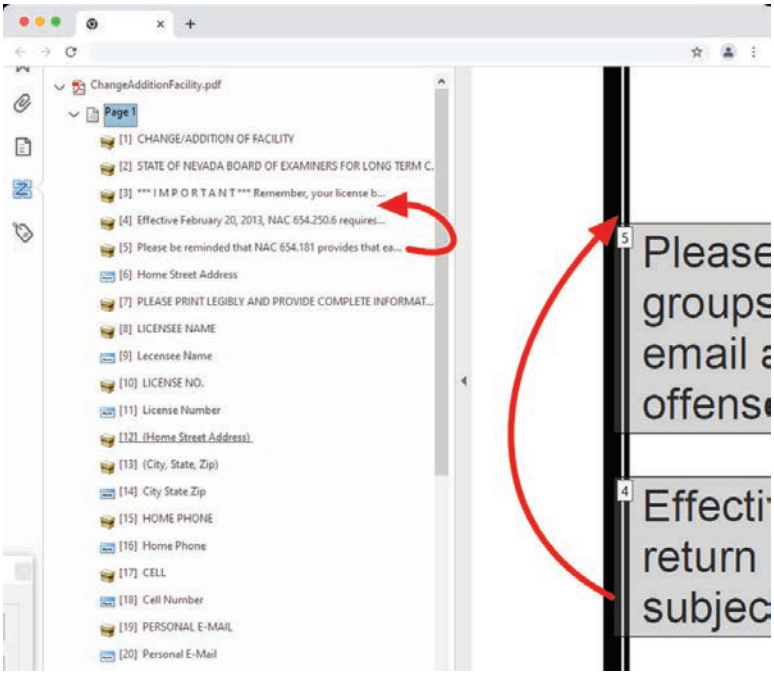



4. Repeat the above steps until the elements in the Order panel match the order of the items on the page. This will give the document the proper reading order and it will be fully accessible.
5. Run a Full Accessibility Check on the document to be sure all issues have been resolved.

# WebAIM Contrast Checker

## What does WebAIM check for?

**WCAG AA requires a contrast ratio of at least 4.5:1 for normal text and 3:1 for large text.**
**WCAG AAA requires a contrast ratio of at least 7:1 for normal text and 4.5:1 for large text.**

Web AIM Contrast Checker can check the color contrast of a document. Using it to check the text color and the background against different sizes of text will show if the contrast passes the required WCAG of both A and AA. It is recommended to pass AAA, when possible. If the contrast does not meet the above requirements, changes can be made by changing and/or adjusting the color contrast of the document's content and background to make it easier to read the information and comply with ADA color contrast requirements.

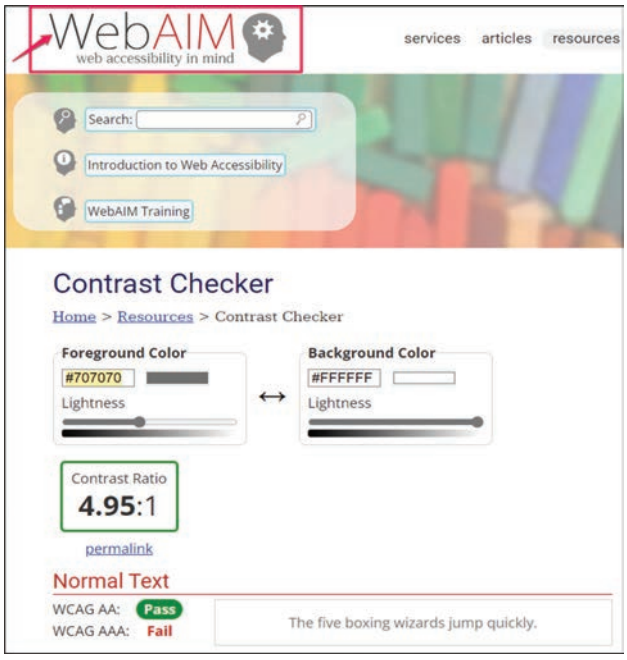
## Using the WebAIM Contrast Checker

Text is easier to read when there is a sufficient contrast between the page background and the text or other elements on the page. If unsure what would be an acceptable color for a good color contrast ratio, then changing to a darker version of the font color may help. For a more accurate contrast choice you can use a color contrast checker.

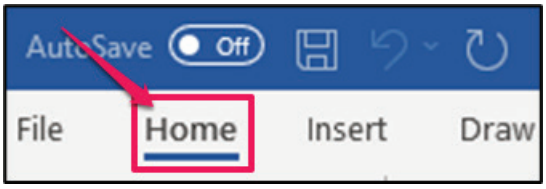
A good resource is to use Web AIM Contrast Checker Website Resource, an online checker to verify WCAG AA and WCAG AAA compliancy from normal to large size text.

### Foreground (Text) Color

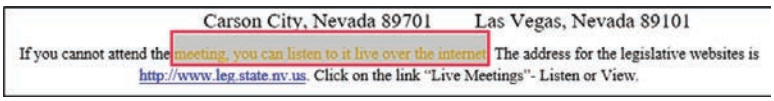
1. Once the website has opened the Contrast Checker can be used.



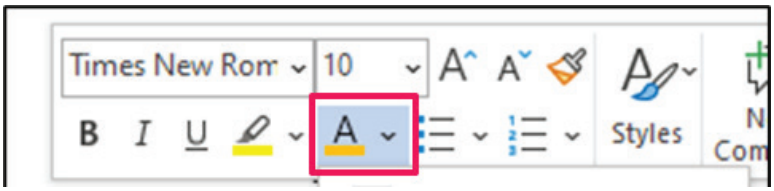
2. Go to the document and click on the Home Tab.



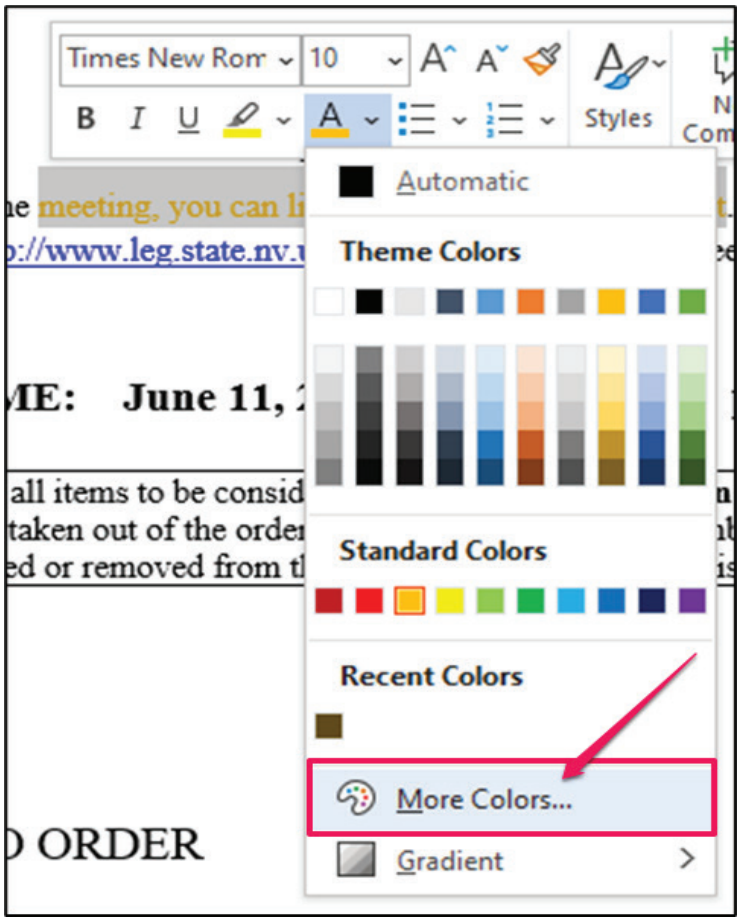

3. Select the words/sentences with the contrast error.



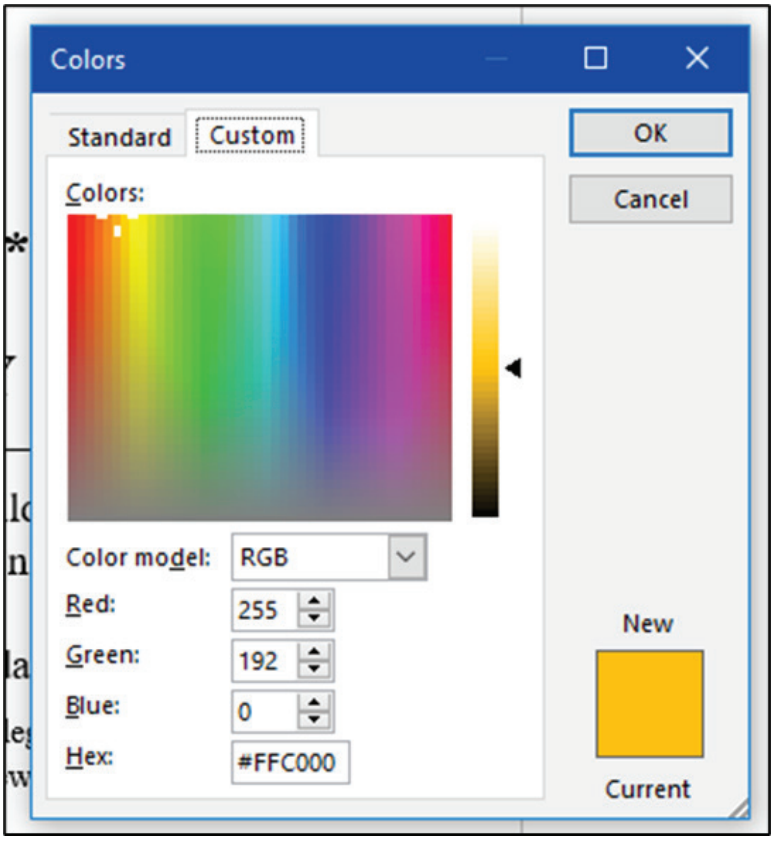

4. Find the "Font Color" tool and select the arrow next to the tool. A drop-down menu will appear with color options.



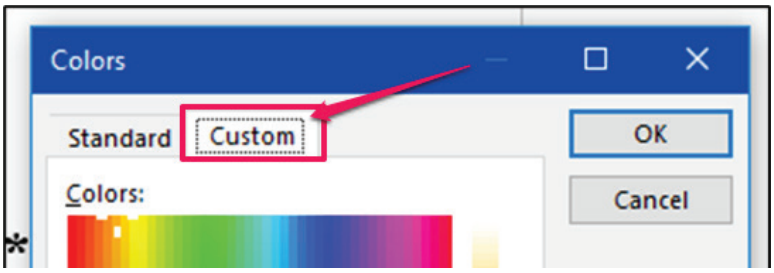

5. Select the "More Colors."



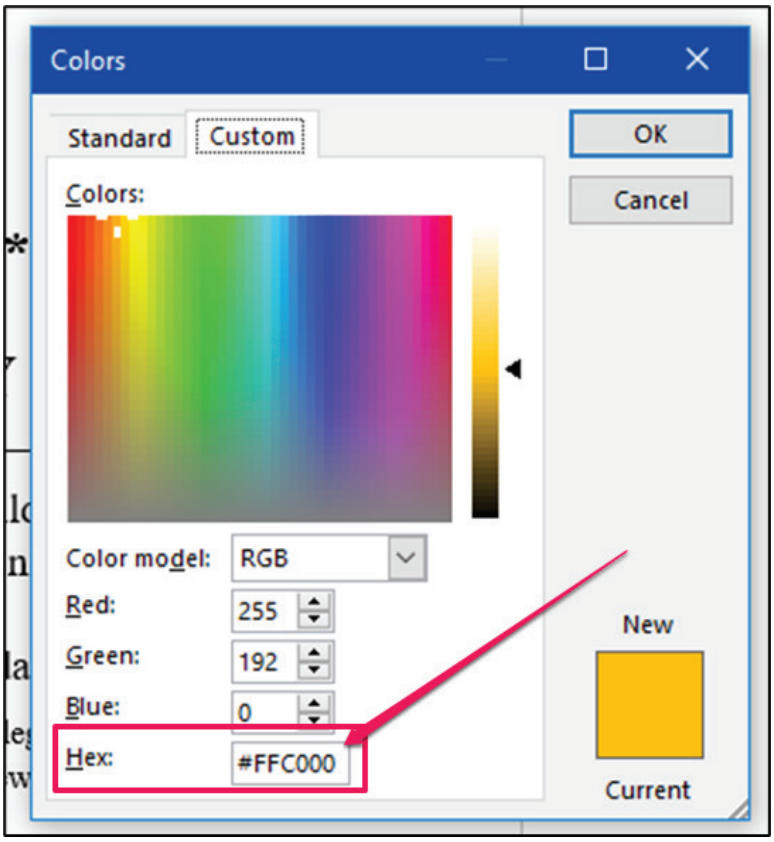
6. The “Colors” box will appear.



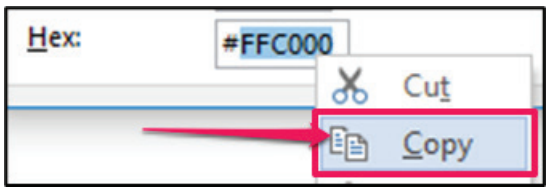

7. Select the “Custom Tab.”



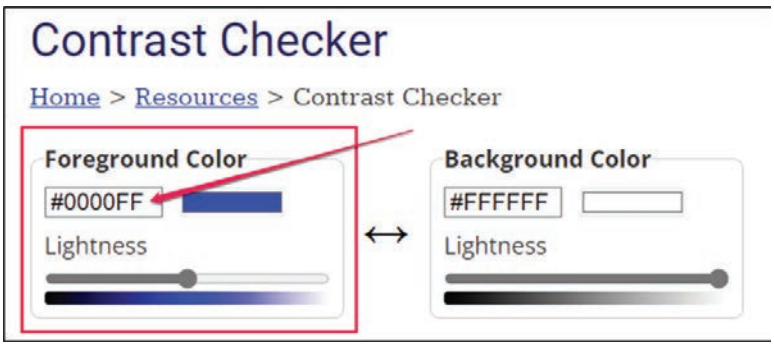
8. Find where it says "Hex," in its input box that is the hexadecimal number of the font color that is causing the error to the document.



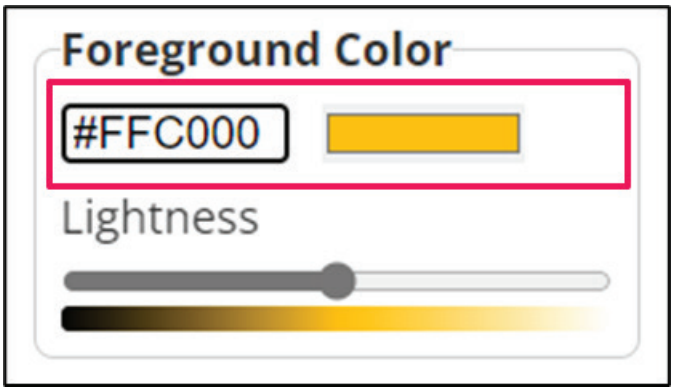

9. Copy the hexadecimal number of the font color.




10. Once the hexadecimal number is copied go back to the [Web AIM Contrast Checker] website.
11. In the Contrast Checker website find the "Foreground Color input box and copy the hexadecimal number copied in Step 9 into the input box."



12. Then press the "tab" key on the keyboard. Now the text color from the document will appear.

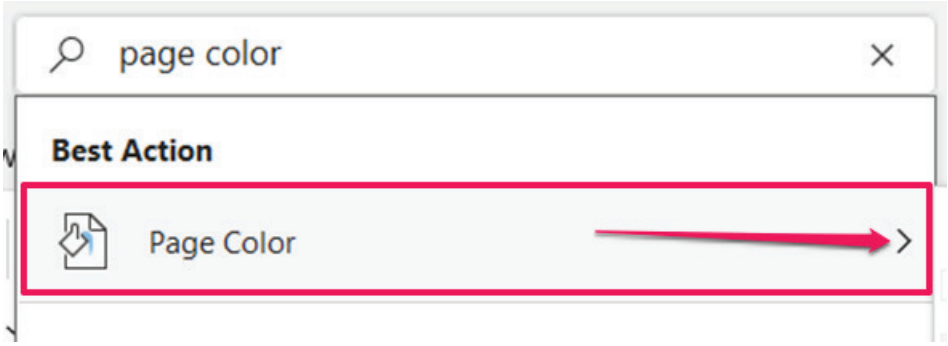



## Background (Page) Color

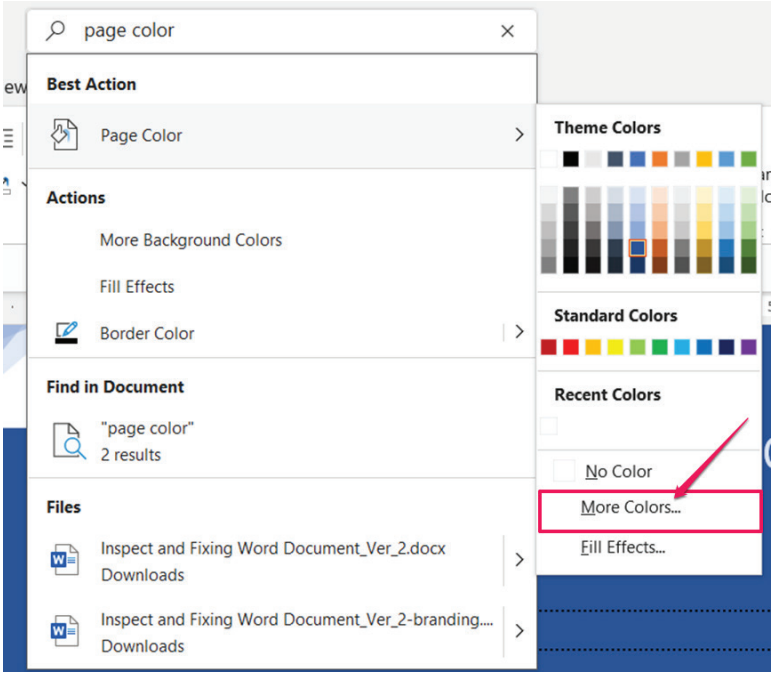
If the background color of the document you are checking for color contrast is white, you can skip checking the background color (skip to Step 18 below) as WebAIM Color Contrast Checker defaults to white. If a background color has been applied, follow the steps below:

13. Enter page color in the search bar at the top of the word document

14. Then choose Page color from the drop-down menu

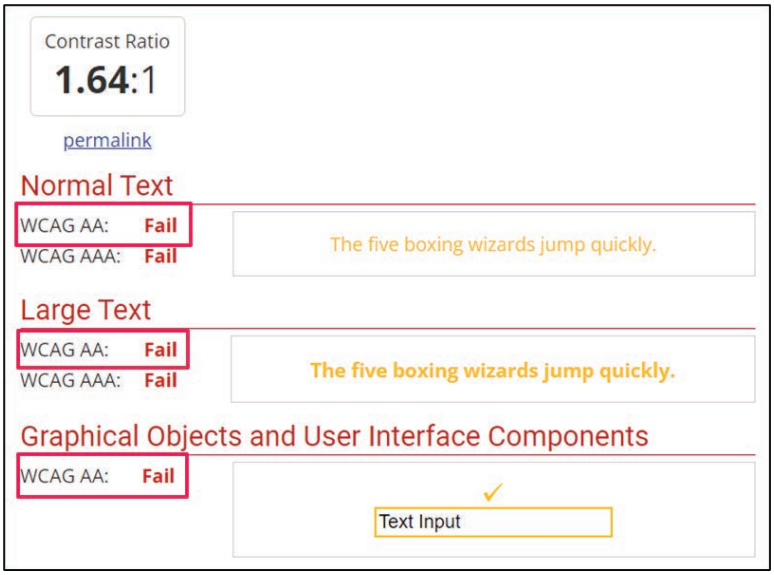


15. Then choose More Colors at the bottom of the Theme Colors drop-down menu.

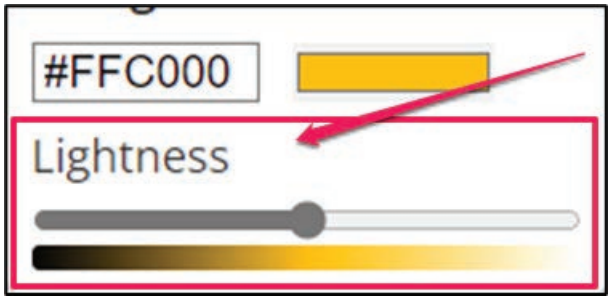



16. Locate the Hex field input box, and copy the Hexadecimal code in the input box.
17. Open the WebAIM Color Contrast Checker and paste the hexadecimal code you copied into the background Hex Value input field. The color picker under the hex value will show the background color.

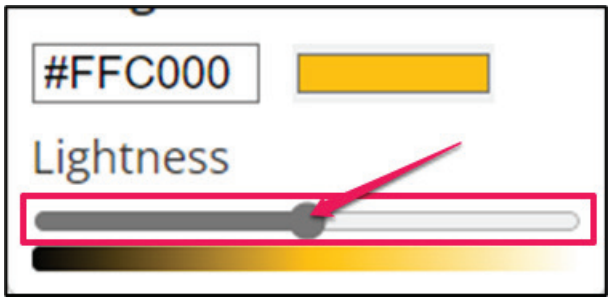
18. Check to see if the Contrast Checker passed the color of the document. Scroll down the website to see if it passes WCAG standards in "Normal," "Large" and "Graphical Objects and User Interface Components with a minimum of AA." If it does not go the top of the webpage, back to Foreground Color.




19. Under the hexadecimal number input box there is a tool called "Lightness."

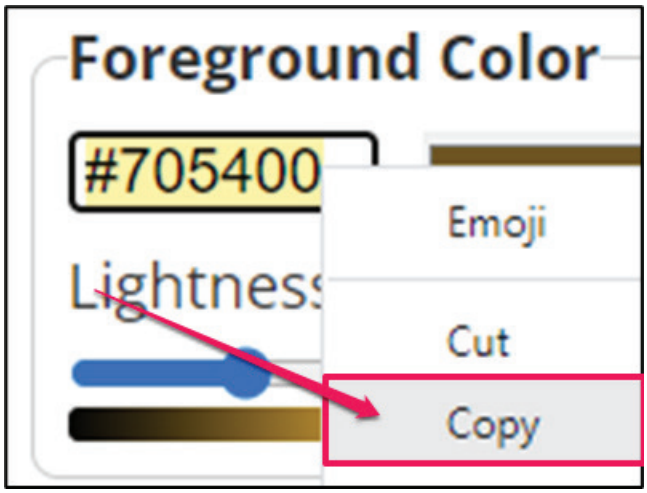



20. In the Lightness tool there is a sliding bar tool. It is used to change the color that is in the hexadecimal input box. It makes the color darker or lighter depending on where the slide tool is positioned. The hexadecimal number will change depending on the position of the slide tool.

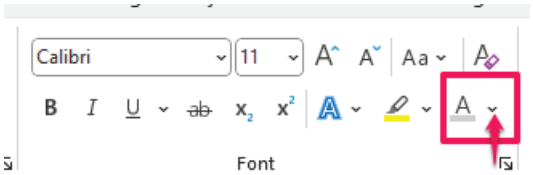


21. Once you've found a contrast ratio color that has passed the WCAG's standards, the Checker will provide you with a pass for all WCAG AA normal text, large text and graphical objects and user interface components. It is recommended to pass AAA, whenever possible.

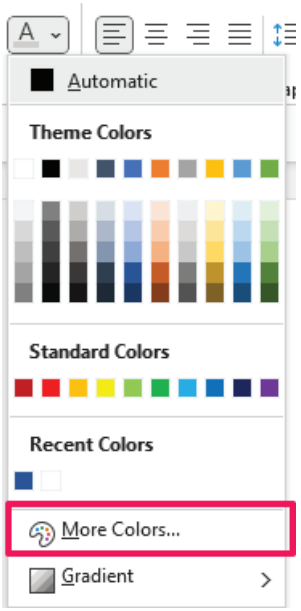
22. Select the new hexadecimal color from the Contrast Checker and right-click and choose Copy from the drop-down menu.



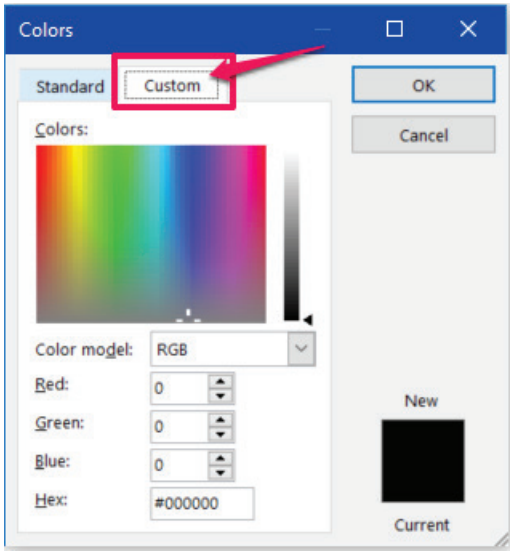

23. Go back to the Microsoft Word document. Then go to the Colors box to the Custom tab. If the Colors box has been previously closed, follow the steps below to open the Colors box.
24. Select the text that is hard to read
25. Click the font icon drop-down button



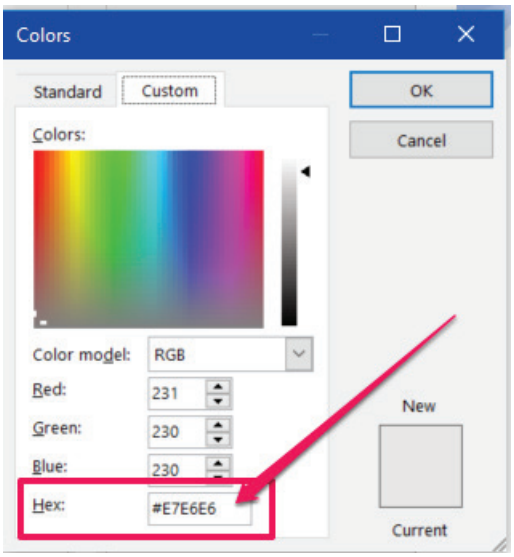
26. When the Theme Color dialog box opens, choose the “More Colors” option.



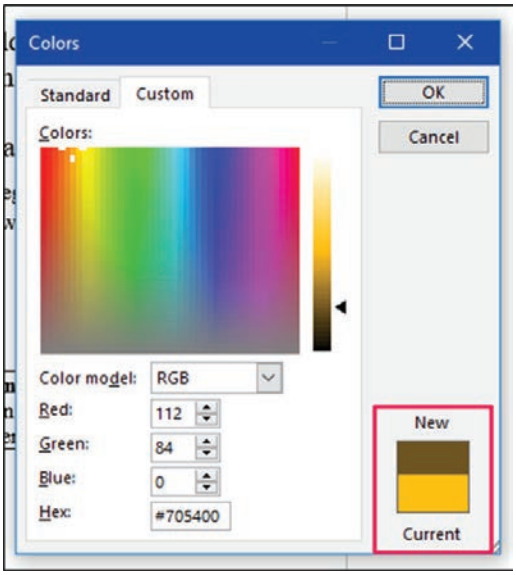

27. Be in the Custom tab of the Colors box.



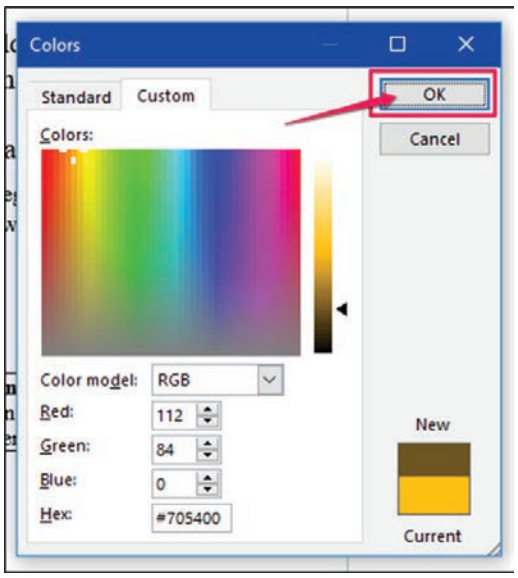
28. Find where it says “Hex” and paste the new hexadecimal number from the Contrast Checker. Then press the “Tab” button on the keyboard.



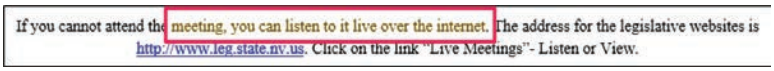

29. To the right of the Hex input box there is a box with two colors. The top that says New is the color from the contrast checker pasted in, the other is the color that is currently being used and is causing the problem for the document.



30. Click on the OK button.




31. Now the selected words/sentence with the contrast error has changed color to the one from the contrast checker and meets ADA Color Contrast requirements.




32. Now there are no more Hard-to-Read Text Contrast errors. The error has now disappeared from the Accessibility Inspection Results.