



Accessible Word Document Training

******The module names (Heading 2) are not voiced, but module section names (Heading 3) are. Any other non-voiced content is marked at the beginning and end with a double asterisk (**). Keyboard keys are listed as they appear on the keyboard (Ctrl, Alt, etc.).******

Module 3: Working with Colors

State of Minnesota Accessible Word document Training Module 3: Working with Colors. This course has no captions because the slide text provides the full transcript. Select the Next button to begin.

Audio Volume

Select the audio button to control the slide audio volume. If you want to turn off the narration, mute the audio with Ctrl +Alt + M.

About this module

In this module you will learn:

- Why we need good color contrast.
- Proper color contrast for text and graphics.
- How to test for color contrast.
- Using more than color alone to give your message.

Accessibility and color

People with low vision or color blindness may have difficulty distinguishing between certain colors. For example, people with red-green color blindness have trouble telling red and green apart. People with low vision may struggle reading light colored text on a light-colored background.

Selecting colors with a high contrast ratio will help make sure your message is easily seen and understood.

Color contrast ratio for text

Select a text color with a minimum contrast ratio between foreground and background colors. (i.e., text color and page color) of:

- to one for regular or normal sized font.
- 3:1 one for large scale font (at least 14 point and bold, or at least 18 point).

Color contrast for graphics

Graphics with informative content need to have a minimum contrast ratio of three to one. This includes graphs, charts, smart art and icons.

Logos, screenshots, and decorative elements do not need to meet the contrast requirements.

Testing for color contrast

How do you know if you have enough color contrast? Test it.

A few options:

- Use the online contrast checker by WebAIM.
- Download the color contrast analyzer by TPGi.
- Preview your document in Grayscale or print to black and white. What may look great in color could appear as similar shades when viewed this way.

You are looking to pass WCAG AA. If the colors do not pass a checker or display well in grayscale, increase the contrast. For text, this can be done by modifying the styles.

Color contrast practice

Use WebAIM's Contrast Checker to test the images on the right. Which text color (foreground) has enough contrast against the white background to pass WCAG AA for normal text?

Hint: click on the color picker box under foreground and background to access the eyedropper tool to select your color or type in the provided hex code.

Which image has accessible color contrast?

- Image 1.
- Image 2
- Image 3.

****If Image 1 or 3 is selected****

Incorrect. Just because the text may look bright doesn't mean there is enough contrast. Please try again.

****If Image 2 is selected****

Correct. The blue text has enough contrast against the white background. Please select Next to continue.

Always test for color contrast

It's a good practice to always check document colors for proper contrast.

Check your text, bullets, images, charts and graphs and shadings.

- Don't assume the default colors of your Word document are accessible.
- The state of Minnesota's Word templates use the Minnesota brand colors Black and Minnesota blue for text styles. These were pretested for proper color contrast against a white background.
- If you use styles consistently throughout the document, you only need to check the text colors for the styles you've used.
- Use good judgment. Even when colors technically pass. If they are hard to read, don't use them.
- The Minnesota Green branding color does not meet color contrast standards when used with white.

Use more than just color

Color can really enhance a design, but do not rely on color alone to convey meaning. People who are color blind or have low vision may miss your message. Include a secondary way people can get the same information.

Think about a stop sign. It has that recognizable bright red color, but it also has other message indicators such as the word stop and an octagonal shape. If someone can't see the red, they will still get the message to stop.

It's important to apply this concept to your work. Take Figure 1 below, which is an example of an employee work calendar. If an employee is available to work, it is shaded green. If they are not available to work, it is shaded red. Let's explore how this calendar, which only uses color to convey availability, can be more accessible.

Select the Next button to continue with this example.

In Figure 2, you can see how this calendar appears to someone with deuteranopia color deficiency. You can no longer identify by green and red.

Select the Next button to continue with this example.

In Figure 3, the letter 'Y' has been added to the green shading and the letter 'N' to the red shading to provide a secondary way to show employee availability.

Select the Next button to continue with this example.

In Figure 4, the person with color blindness can now tell who is available to work.

More techniques: Important messages

Don't just use red to indicate something important. Add text like “Warning” or “Important” so all audiences get the message.

More techniques: Graphs

Use colors, symbols and patterns to emphasize the difference between lines on a graph.

Check for Understanding: Question 1

Choose your answer, then select Submit below.

The default colors in the word template are always accessible.

- True.
- False

****If True is selected****

Incorrect. Default colors are not necessarily accessible. Use tools like WebAIM’s Contrast Checker to make sure the colors meet accessibility standards. Please select Next to continue.

****If False is selected****

Correct. Default colors are not necessarily accessible. Use tools like WebAIM’s Contrast Checker to make sure the colors meet accessibility standards.

Please select Next to continue.

Check for Understanding: Question 2

Choose the correct answer, then elect Submit below.

A good way to check for color contrast is:

- A. Preview the document in black and white.
- B. Use an online tool like WebAIM’s contrast checker.
- C. Download a tool like the Color Contrast Analyzer.
- D. All of the above.

****If A, B, or C is selected****

Incorrect. There are multiple ways to check for color contrast. Please try again.

****If D is selected****

Correct. Use tools like the ones mentioned to check for an accessible contrast ratio. Printing a document in black and white beforehand is also a good step to make sure the shades of grey aren't too close. Please select Next to continue.

Check for Understanding: Question 3

Choose your answer, then select Submit below.

Traffic signs use a combination of color, shapes and words and symbols to give drivers information. We also need to provide three ways (color plus words and symbols) when color coding information for readers.

- True
- False

****If True is selected****

Incorrect. When color coding information, we only need to provide one additional way for people to get the information. Please select Next to continue.

****If False is selected****

Correct. Not everyone can perceive color, but you only need to provide one additional way for people to get information. Please select Next to continue.

Practice document.

You're now ready to apply what you've learned.

Download and follow the instructions in the Module 3 Practice Document. In the next section, a set of questions allows you to review how you did.

A Module 3 Completed Practice Document is also available under the Resources tab above for you to check your work.

Review Question 1

Choose your answer, then select submit below.

Did you test the color contrast of the words, accessibility and inclusion? The green on purple accessibility should pass and the blue on white inclusion should fail.

- Yes.
- I need help.

****If Yes is selected****

Well done. Please select Next to continue.

****If I need help is selected****

Review question 1 help.

To check color contrast:

1. Open the WebAIM Contrast Checker.
2. Click the color box under “foreground color” to access the eyedropper tool. Select the foreground (font) color or type in the hex code.
3. Click the color box under “background color” to access the eyedropper tool. Select the background color or type in the hex code.
4. Check the results under WCAG AA NormalText.

Please select Next to continue.

Review Question 2

Choose your answer, then select Submit below.

Did you test the color contrast of the cream wheelchair icon against the green circle background and find that it passes color contrast?

- Yes.
- I need help.

****If Yes is selected****

Well done. Please select Next to continue.

****If I need help is selected****

Review question 2 help.

1. Open the WebAIM Contrast Checker.
2. Click the color box under “foreground color” to access the eyedropper tool and select the wheelchair icon color. Or type in the hex code.
3. Click the color box under “background color” to access the eyedropper tool and select the background color. Or type in the hex code.
4. Check the results under WCAG AA Graphic Objects and User Interface Components.

Please select Next to continue.

Review Question 3

Choose your answer, then select Submit below.

This project status indicated by more than just color.

- Yes.
- I need help.
- I need help.

****If Yes is selected****

Well done. Please select Next to continue.

****If I need help is selected****

Review question 3 help.

The project status is only conveyed by color. It needs to use at least one more technique to make your message clear to all users. One option is to keep the colors in the table but change the “XX” to read “In Progress” and “Finished”. Please select Next to continue.

Lesson complete

Congratulations! You successfully completed Module 3: Working with Colors.

The Office of Accessibility would like to thank you for your hard work. Additional resources, such as a summary guide for this module, are available in the Resources menu in the top right.

Click the Exit button to continue with the Course.