

# Digital Accessibility Guide

For Authors of Electronic Material Distributed Outside MSU HR

**MICHIGAN STATE**  
**UNIVERSITY** | Human Resources

# Welcome to Accessibility

The goal of accessibility is to allow equal access for all employees at Michigan State University. That applies to software and documentation as well as facilities and educational resources.

Michigan State University is bound by Section 508 of the *Rehabilitation Act of 1973*, but has voluntarily adopted the more specific *Web Content Accessibility Guidelines (WCAG)*. We comply at level AA of those guidelines.

These goals are met by making sure employees who are experiencing a disability can perceive and use, or alternatively use assistive technology, to access the same information as others. When this is not possible information must be presented in some other, yet equivalent, way.

## Table of Contents

<b>WELCOME TO ACCESSIBILITY</b>	<b>2</b>
<b>Table of Contents</b>	<b>2</b>
<b>Your Role</b>	<b>3</b>
It's Easy, Actually!	3
A Special Note about Vendors	3
About this Guide	3
<b>Creating an Accessible Document</b>	<b>4</b>
Document Properties	4
Headings	5
Text	6
Hyperlinks	8
Lists	9
Tables	10
Images	11
Audio, Video, and Interactive Video	12
Finishing a Document (Check Accessibility & Output to PDF)	13
<b>Appendix I: Color Contrast</b>	<b>14</b>
<b>Resources</b>	<b>15</b>
Additional Guidance	15
Software Resources	15
Training	15

## Your Role

As an author of content that may be distributed or available to people outside of MSU Human Resources, you share in the responsibility for making content accessible.

## It's Easy, Actually!

---

Creating accessible documents is simple using the tools built into the editors, such as Microsoft Word, Outlook, Excel, PowerPoint, and the OmniUpdate website editor. With a little planning and a few seconds spent when adding content, you will save countless hours trying to fix content later. This will also make your documents easier to maintain.

NEVER use Prezi for presentations as it is inherently inaccessible to people with vision difficulties.

## A Special Note about Vendors

---

These standards apply to ALL content you distribute to employees, applicants, or other parties outside MSU HR. This includes content provided by vendors. They are also required to assure documents are accessible. If you receive documentation (documents, files, videos, book excerpts) that is inaccessible, give it back to the vendor with this guide. If additional direction is needed on how to correct issues, contact the HR User Experience team (email in the Resources section).

The Resources section includes free on-line references, as well as organizations that provide training on accomplishing these standards.

If vendors are using Adobe InDesign to create documents, direct them to the Adobe entries in the Resources section of this guide.

If vendors are unwilling or unable to correct their resources, and we cannot make the corrections here, place verbiage next to the link to the document that:

- Explains that an accessible version was requested
- Directs the user to contact the HR Solutions Center (or whomever is appropriate), with phone and email information, for help reading the document.

## About this Guide

---

While it might seem easier for authors to have this content arranged by the type of editor being used (e.g. MS Word, Excel, etc.) we have opted instead to arrange items by the type of element (e.g. tables, links). Our hope is that this will call attention to the fact that many items are often overlooked in different software applications. For example:

- A grid of data in MS Excel does NOT constitute an accessible table
- The use of headings is often overlooked in spreadsheets
- Headings are often missing from PowerPoint presentations
- The automatic insertion of a hyperlink is taken for granted

Additionally, the phrase “**context menu**” is used throughout this document. A context menu contains options specific to an element. Context menus are typically found by using the right mouse button. However, people who cannot use a mouse would not be able to follow such an instruction. Rather, they would access the context menu through keystrokes or some other method.

These techniques apply to all digital communications, such as emails, posts on social media, blogs, etc. While only four software editors are documented here (MS Word, MS Excel, MS PowerPoint, and OmniUpdate), almost all software has a way to accomplish these requirement. If the software does not allow for these techniques (for example, at the time of this writing, Prezi presentations cannot be made accessible), do not use it!

# Creating an Accessible Document

## Document Properties

---

The first thing a person encounters when using a screen reader is information about the document. It is important that information be accurate.

### Document Title

The Document Title is the most important piece of information. It is read to the user and available to everyone who accesses the document electronically. On a website this displays in the browser tab strip.

### Learn More

[Understanding: Page Titled](#)

[How to Meet: Page Titled](#)

#### Never...

#### Never Copy Documents without editing the Title

Remember, when you copy a document to make a different version of it, it retains the document title. Make sure to update this on all documents.

#### Never Remove Slide Titles in PowerPoint

If you should remove a slide title, directions for adding it back are in the following table.

### Directions

Tool	How do I?
Word & Outlook	<p><b>SET DOCUMENT TITLE</b></p> <p>From the menu bar, select File. In the pane that opens, enter a meaningful name in the Title field. Make sure to save the file.</p> <p>In MS Outlook, an email's subject line is equivalent to the document title.</p>
Excel	<p><b>SET DOCUMENT TITLE</b></p> <p>From the menu bar, select File. In the pane that opens, enter a meaningful name in the Title field. Make sure to save the file.</p>
PowerPoint	<p><b>SET DOCUMENT TITLE</b></p> <p>From the menu bar, select File. In the pane that opens, enter a meaningful name in the Title field. Make sure to save the file.</p>
OmniUpdate	<p><b>SET DOCUMENT TITLE</b></p> <ol style="list-style-type: none"><li>1. Open the document</li><li>2. Check out the document</li><li>3. Select the Properties button in the tab</li><li>4. Open the Parameters section</li><li>5. Enter the Title field</li><li>6. Save and Publish</li></ol>

# Headings

Headers are the primary way people who use screen readers navigate through documents. They use key combinations to jump from header to header or drill down deeper into the content. They can also call up the structure of a document based on headers.

## Only One “Heading 1”

Documents, especially websites, should only have heading at level one for the entire document.

## Logically Nested

Headers create a nested structure. It is best practice that headings should never skip a level. That is, a level 4 heading should be within a level 3 heading, which is within a level 2 heading. A level 4 heading should never be directly inside a level 2 heading, for example.

Someone using a screen reader might encounter a heading at level 2. They then look for a heading at level 3. Not finding level 3, they move on to the next heading at level 2. If there is a heading at level 4 placed beneath level 2, they will have missed that content.

## Use Formatting Tools

Editing tools provide a way to format and apply headings; use them!

## Page Title (PowerPoint)

Every slide in PowerPoint should have a unique title. PowerPoint templates place these here for you. Do not remove them. IF they get in the way, see below for how to manage them. When a topic spans multiple slides, make sure the title recognizes that on each page and is unique (e.g. “(1 of 2).”

## Learn More

[Understanding: Headings and Labels](#)

[How to Meet: Headings and Labels](#)

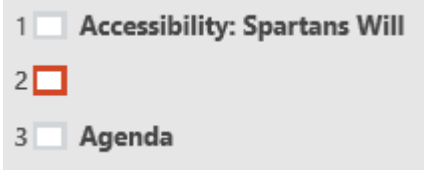
### Never...

#### Never Skip Heading Levels

#### Never Format font to look like a heading

Often people attempt to create the visual appearance of a heading but don't actually create a heading.

## Directions for Using Headings

Tool	How do I?
Word & Outlook	<b>APPLY HEADINGS</b> Place the cursor in the paragraph that will become a heading. In the Home tab of the ribbon (Format Text in Outlook on desktop), go to the Styles section. Select the appropriate heading.
	<b>MODIFY HEADINGS</b> Use the context menu on the given heading in the Styles toolbar. Select “Modify.” Change the font, or other items under the Format button.
Excel	<b>APPLY HEADINGS</b> Place the cursor in the paragraph that will become a heading. In the Home tab of the ribbon, go to the Styles section. Select the appropriate “Heading 1”, “Heading 2”, etc.
	<b>MODIFY HEADINGS</b> Use the context menu on the heading in the Styles toolbar. Select “Modify.” Change the font or other items under the Format button.
PowerPoint	<b>SLIDE TITLE</b> If the Slide Title box has been removed from the document, it can be re-added. <ol style="list-style-type: none"><li>1. From ribbon bar, select the View tab.</li><li>2. Choose the Outline View</li><li>3. The slide title can be typed into the space next to the slide title</li></ol> 
	<b>APPLY HEADINGS</b> “Edit...” the section of the page. Place the cursor in the paragraph to be formatted as a heading. Use the formatting dropdown in the toolbar.
OmniUpdate	<b>MODIFY HEADINGS</b> Headings are preformatted and cannot be changed. Do not reformat text of heading.

## Text

---

Text is the basic way of communicating in written form. However, it is possible to make this difficult for people experiencing visual impairments.

Adjust font size and color in a document by adjusting the styles. Only format text using the styles.

### Color Contrast

Text must stand out from its background. A color checker like the Colour Contrast Analyser by The Paciello Group can help determine if you have enough contrast between the font color you chose and that colorful background. Look for a contrast of

- 4.5:1 for font less than 14 point
- 3.0:1 for large font (either: at least 18 point tall, or at least 14 point and boldface)
- 3.0:1 for the contrast between two sets of adjoining text (like links within a paragraph)

Don't assume standard colors in themes delivered by Microsoft meet these requirements. See Appendix I for proper color contrast using the MSU color palette.

### Font Size

The smaller the font, the more difficult it is to read.

- Word uses a minimum font of 11 point font in a 12 point space (the default line spacing of 1.08 or more).
- Excel uses a minimum of 11 point font in a 14.4 point cell.
- OmniUpdate is set to 15 point; never smaller.
- A best practice for PowerPoint presentations is to use 16 point font for the absolute minimum.

### Learn More

[Understanding: Use of Color](#)

[How to Meet: Use of Color](#)

[Understanding: Contrast \(Minimum\)](#)

[How to Meet: Contrast \(Minimum\)](#)

[Word: Heading Styles \(webaccess.msu.edu\)](#)

#### **Never...**

##### **Never Use a Graphic in Place of Text**

See the Images section for more detail.


##### **Never Rely on the Zoom tool to Read Font**

Magnifying documents should never be relied upon since there are different ways to zoom, which act differently across browsers.

##### **Never Use Text Boxes**

Except for PowerPoint, text boxes are essentially graphics and thus are not read.

## Directions for Formatting Text

Tool	How do I?
Word & Outlook	<p>From the ribbon bar, choose the Home tab (Format Text in Outlook), and pick the style you want to apply from the “Styles” section.</p> <p><b>SET COLOR CONTRAST &amp; FONT SIZE</b></p> <ol style="list-style-type: none"> <li>1. Place your cursor in the text to be changed; use the context menu in the Styles section of the Home ribbon bar</li> <li>2. Select “Modify”</li> <li>3. Font size and color can be adjusted in the resulting screen</li> </ol> <p>All text with this style applied will be updated.</p>
Excel	<p><b>SET COLOR CONTRAST &amp; FONT SIZE</b></p> <ol style="list-style-type: none"> <li>1. On the Home tab, in the Styles group, choose Cell Styles</li> <li>2. Do one of the following:             <ol style="list-style-type: none"> <li>a. To modify an existing cell style, open the context menu, and then select Modify</li> <li>b. To create a duplicate of an existing cell style, open the context menu, and then select Duplicate</li> </ol> </li> <li>3. In the Style name box, type an appropriate name for the new style. Note: A duplicate cell style and a renamed cell style are added to the list of custom cell styles. If you do not rename a built-in cell style, the built-in cell style will be updated with any changes that you make</li> <li>4. Choose Format</li> <li>5. On the various tabs in the Format Cells dialog box, select the formatting that you want, then OK</li> <li>6. In the Style dialog box, under Style Includes, select or clear the check boxes for what you want to include</li> </ol>
PowerPoint	<p>It is recommended that you change fonts globally using the Slide Master</p> <p><b>SET COLOR CONTRAST &amp; FONT SIZE</b></p> <ol style="list-style-type: none"> <li>1. On the View tab, in the Master Views group, select Slide Master.</li> <li>2. The left pane contains the slide masters and layouts, select the slide master thumbnail (or other layout)</li> <li>3. On the slide master (or layout), select the title text or the level of body text for the new font style.</li> <li>4. On the Slide Master tab, in the Background group, select Fonts, and then select a font from the list</li> <li>5. To change colors, choose either the Colors dropdown, then Pick a value from the list, or create Custom Colors</li> <li>6. Close the Master View</li> </ol>
OmniUpdate	<p>In OmniUpdate, always use the font styles dropdown.</p> <p>On rare occasion, you may want to add emphasis.</p> <p><b>SET COLOR CONTRAST &amp; FONT SIZE</b></p> <ol style="list-style-type: none"> <li>1. Select the Paragraph text to change</li> <li>2. Apply one of the following:             <ol style="list-style-type: none"> <li>a. Font Sizes</li> <li>b. Background Color</li> <li>c. Bold or Italic</li> </ol> </li> <li>3. The () button clears formatting</li> </ol>

# Hyperlinks

Hyperlinks are used to navigate to an email, another document, website, or place in the same document.

## Naming

Naming a hyperlink is easy: just title similar to the page or anchor/bookmark to which it is pointing. For example:

[Microsoft Word Accessibility](#)

[Current Employees](#)

## Obviously Selectable

It must be obvious that hyperlink text is selectable. This is normally accomplished by applying an underline. However, size, contrasting color, and both location and spacing around the link (if not in a paragraph) can also call attention to the selectable nature of text.

## Color Contrast

Use a contrast analyzer to meet contrast ratios:

- 4.5:1 contrast ratio against the background
- 3.0:1 contrast ratio IF they are near other text

Microsoft defaults blue for links, which fails the contrast test. See Appendix I for proper color contrast using the MSU color palette.

## Tooltip/Hover Text

Not required for accessibility, tooltips (also called hover text or the link's title) provide information about the link.

## Manually Check Links

Accessibility Tools will not catch a broken link. Make sure to manually check all links in your document.

## Learn More

[Understanding: Link Purpose](#)

[How to Meet: Link Purpose](#)

### Never...

#### Never use the URL, "click here" or slang

- CORRECT – [MSU Human Resources Homepage](#)
- CORRECT – [Accessibility Team](#) (this is an email)
- INCORRECT - <https://hr.msu.edu>
- INCORRECT – To go to HR, [Click Here](#)

## Directions for Using Hyperlinks

Tool	How do I?
Word & Outlook	<b>INSERT HYPERLINK</b> Select the text. From the ribbon bar, go to the <b>Insert</b> tab, then <b>Link</b> in the <b>Link</b> section. Enter the email, URL in the <b>Address</b> field or select the place in the document which will be the target.
	<b>CHANGE HYPERLINK COLOR</b> From the <b>Design</b> tab of the ribbon bar, choose the <b>Colors</b> dropdown, then <b>Customize Colors</b> . Enter the desired color for hyperlinks.
Excel	<b>INSERT HYPERLINK</b> Select the text. From the ribbon bar go to the <b>Insert</b> tab, then <b>Link</b> in the <b>Link</b> section. Enter the email, URL in the <b>Address</b> field or select the place in the document which will be the target.
	<b>CHANGE HYPERLINK COLOR</b> From the <b>Page Layout</b> tab of the ribbon bar, choose the <b>Colors</b> dropdown, then <b>Customize Colors</b> . Enter the desired color for hyperlinks.
PowerPoint	<b>INSERT HYPERLINK</b> Highlight the text inside a text box. From the ribbon bar go to the <b>Insert</b> tab, then <b>Link</b> in the <b>Link</b> section. Enter the email, URL in the <b>Address</b> field or select the place in the document which will be the target.
	<b>CHANGE HYPERLINK COLOR</b> From the ribbon bar, go to the <b>Design</b> tab. Expand the <b>Variants</b> section, then choose <b>Colors</b> , then <b>Customize Colors</b> . Set the colors.
OmniUpdate	<b>INSERT HYPERLINK</b> Highlight the text (watch for trailing spaces), choose the <b>Insert/Edit Link</b> (chain link icon) from the toolbar. <ul style="list-style-type: none"><li>• Navigate to a page in OmniUpdate</li><li>• Enter the URL for other sites</li></ul>
	<b>CHANGE HYPERLINK COLOR</b> The color of hyperlinks is predetermined.



# Lists

Lists are used to either present short groups of similar items or steps. There are two kinds of lists:

- Unordered/bulleted list – the order of the items does not matter, like this list you are reading now
- Ordered/numbered list – used to present a sequence of steps or hierarchy of values

## Proper List

Lists have codes before and after them, as well as before and after each item, which the screen reader communicates. Use the list tool in whatever software you are using to create lists.

## Multi-Level Lists

A multi-level list is one in which additional details under one bullet are added and indented. Use the indent option of the tool in which you are creating the list.

## Learn More

[Tutorial: Content Structure - Lists](#)

### Never...

#### Never Mix Types of Lists

Switching between types of list, for example, putting bullets for sub-steps inside a numbered list, will often cause confusion for the screen reader. Once the numbered section of the list resumes, a screen reader may treat it as a new list and read the value “1” even though it may be step 5, for example.













#### Never Break Lists

Lists should be continuous. Inserting paragraph returns to add blank spaces between list items results in many lists each with one item. Images can be inserted into a bulleted list but must be inserted “in-line.” See the Images section for more details. In some programs, the <shift> and <enter> keys used together will insert a line break, which does not interrupt a list.

#### Never Manually Add Bullets

Use the list tool in the software. Don’t type or insert a bullet symbol. This is not a true list.

## Directions for Using Lists

Tool	How do I?
Word & Outlook	<b>CREATE PROPER LIST</b> Place your cursor where you want the list to begin. On the ribbon bar, in the Home tab, choose either the bullets (  ) or numbering (  ) icons. Use the return key to add the next item in the list.
	<b>CREATE MULTI-LEVEL LIST</b> Place your cursor where you want the next bullet to be indented and use the increase indent (  ) and decrease indent (  ) tools.
Excel	<b>CREATE PROPER LIST</b> Microsoft Excel cannot produce a correct bulleted list. You can list steps in a separate column of an accessible table.
PowerPoint	<b>CREATE PROPER LIST</b> Place your cursor where you want the list to begin. On the ribbon bar, in the Home tab, choose either the bullets (  ) or numbering (  ) icons. Use the return key to add the next item in the list.
	<b>CREATE MULTI-LEVEL LIST</b> Place your cursor where you want the next bullet to be indented and use the increase indent (  ) and decrease indent (  ) tools.
OmniUpdate	<b>CREATE PROPER LIST</b> Place your cursor where you want the list to begin. On the ribbon bar, in the Home tab, choose either the bullets (  ) or numbering (  ) icons. Use the return key to add the next item in the list.
	<b>CREATE MULTI-LEVEL LIST</b> Place your cursor where you want the next bullet to be indented and use the increase indent (  ) and decrease indent (  ) tools.

# Tables

Tables are ONLY used to present standardized data in rows and columns.

Tables should not be used to arrange content on a page or screen.

Also, the grid of cells in a MS Excel spreadsheet is not a table, and be confusing for a person using a screen reader.

## Header Row

Every table must have a single header row. People with eyesight can glance up to see what a column heading is if they lose their way. People who use screen readers cannot. The screen reader announces the heading value with the value in the cell, which makes the cell value meaningful.

## Alternative Text

Alternative text allows the user of a screen reader to gather more information about a table so they can decide if they want to navigate through it or skip over it.

## Learn More

[Tutorial: Tables Concepts](#)

### Never...

#### Never Merge Cells

Tables should never have merged cells. People who use the tab and arrow keys to navigate a table will quickly become lost, and data will be skipped by the screen reader.

#### Never Structure Page Layout using Tables

Tables should never be used to structure items in a page for visual purposes.

## Directions for Using Tables

Tool	How do I?
Word & Outlook	<b>SET HEADER ROW</b> Place the cursor in the table's top row. From the <b>Table Tools</b> section of the ribbon, choose the <b>Layout</b> tab, then the <b>Properties</b> button. In the pop-up, go to the <b>Row</b> tab and choose <b>Repeat as the header row at the top of each page</b> .
	<b>ADD ALTERNATIVE TEXT</b> From the table and select the <b>Layout</b> tab in the ribbon bar. Choose the <b>Properties</b> option. On the <b>Alt Text</b> tab, complete the <b>Description</b> .
Excel	<b>SET HEADER ROW</b> Select cells that will form the table. Choose <b>Insert</b> in the ribbon bar, then the <b>Table</b> option. In the pop-up, check <b>My table has headers</b> . Then, select the cells of the header row. From the <b>Formula</b> tab, <b>Define Name</b> , enter "Title" as the <b>Name</b> , then <b>OK</b> .
	<b>ADD ALTERNATIVE TEXT</b> Choose the <b>Table</b> menu, followed by <b>Alternative Text</b> . Enter the <b>Description</b> .
PowerPoint	<b>SET HEADER ROW</b> Choose <b>Insert</b> from the ribbon bar. Then select the table icon. Choose the size of your table. On the <b>Design</b> tab of the ribbon bar, the <b>Header Row</b> option should be checked automatically.
	<b>ADD ALTERNATIVE TEXT</b> From the table, open the context menu, then choose <b>Format Shape</b> . In the <b>Shape Options</b> section, go to the <b>Size &amp; Properties</b> icon. Expand the <b>Alt Text</b> section and complete the <b>Description</b> field.
OmniUpdate	<b>SET HEADER ROW</b> Place cursor in the table's top row. From the table menu in the toolbar, choose the <b>Row</b> menu item, then <b>Row Properties</b> . Set the <b>Row type</b> field to <b>Header</b> . <b>ALTERNATIVE TEXT IS NOT POSSIBLE IN OMNIUPDATE</b>

# Images

Images are used in many ways:

- Present information in a graphical manner
- Provide examples supporting text
- Decorate or creating spacing in a document

## Alternative Text

People with a visual impairment have images described to them from “alternative text.” How much information is needed depends on the image’s purpose. For example:

- Infographics details that be included in alternative text. “8,000 faculty, 6,500 staff in 2018”
- Images used for spacing or decoration are NOT read, so must have blank (“ ”) alternative text set.
- Demonstration of the text needs little description. For example, “screenshot of login page”
- However, if an image has detail that is NOT in the text, that detail must be included in the alternative text, for example “flood waters approaching Computer Center”

## Alignment

Images must always be “in-line” with text. To get text next to an image (MS Word) format that section of the page in columns. This acceptable alternative does not interrupt the reading order.

## Contrast

People who experience low-vision may not make out details of an image due to contrast. Color contrast analyzers grade colors on screen as pass/fail. Appendix I has the proper color contrast using the MSU color palette.

## Learn More

[Understanding: Non-Text Content](#)

[How to Meet: Non-Text Content](#)

[Understanding: Meaningful Sequence](#)

[How to Meet: Meaningful Sequence](#)

### Never...


#### Never Wrap Text

Wrapping text around an image removes it from the proper reading order. Place it “in-line” instead.

#### Never Overlap Images

Edit images rather than place arrows/callouts on top.

## Directions for Using Images

Tool	How do I?
Word/Outlook	<p><b>ADD ALTERNATIVE TEXT</b></p> <p>After inserting the image, select it and use the context menu. Choose <b>Edit Alt Text</b> from the menu. Enter a <b>description</b>. In this same place “Mark as decorative.”</p>
Excel	<p><b>DOCK AN IMAGE</b></p> <ol style="list-style-type: none"> <li>1. Size a cell to be larger than the image</li> <li>2. Select the cell, then from the ribbon bar choose <b>Insert</b>, then <b>Pictures</b></li> <li>3. Select the image, then <b>insert</b></li> <li>4. Hold down the &lt;Alt&gt; key while dragging the image to a corner of the cell</li> </ol> <p><b>ADD ALTERNATIVE TEXT</b></p> <p>Select the image, open the context menu, then choose <b>Edit Alt Text</b>. Enter a <b>Description</b> in the pane. In this same place “Mark as decorative.”</p>
PowerPoint	<p><b>ADD ALTERNATIVE TEXT</b></p> <p>Select image then go to the context menu. Choose <b>Edit Alt Text</b>. Enter <b>description</b>. In this same place “Mark as decorative.”</p> <p><b>SET READING ORDER</b></p> <p>Elements of slides are read in the sequence in which they are placed on the slide. Adjustment items to read from left to right and top to bottom.</p> <ol style="list-style-type: none"> <li>1. From the ribbon bar, choose the <b>Home</b> tab. Select the <b>Arrange</b> box, then choose <b>Selection Pane</b> from the menu</li> <li>2. In the pane that opens, the items are listed in the REVERSE order in which they will be read</li> <li>3. Drag the FIRST thing read to the BOTTOM, and the LAST item to the top, with everything in reverse order between</li> </ol> <p>Proper reading order is essential when a PowerPoint is output to Adobe PDF!</p>
OU	<p><b>ADD ALTERNATIVE TEXT</b></p> <p>Select the image, in the toolbar, choose the Insert/Edit Image icon (). Enter a <b>Description</b>.</p>

## Audio, Video, and Interactive Video

Audio and video engage senses which help engage the listener. However, people who experience hearing or vision difficulties need an alternative way to get the information contained in the audio or video.

The key is to make sure that the information that cannot be perceived by one sense is made available to another sense.

### An Equal Alternative for Audio

Information communicated purely in audio format must have the comparable text made available. This is typically a transcript that accompanies the audio.

### An Equal Alternative for Audio in Video

Audio that is embedded within a video should have closed captioning set. Different than a transcript, with closed captioning the viewer can keep the text synchronized with the images on screen. In designing videos, make sure that the closed captioning does not obscure any important information shown on screen.

Closed captioning is available through Kaltura MediaSpace. However, once the automated captioning is done, you **MUST** review it manually to correct any misspellings and add the proper punctuation. You should also make sure that the text matches the screen in which the words were spoken.

### Learn More

[Timed-Based Media](#)

### An Equal Alternative for Video

For users who cannot see a video, some information which is presented purely visually may be lost. Again, a transcript that can be read by screen readers will assist the user.

However, “descriptive audio” or a description transcript better option. Descriptive audio contains that lost information. For example, the spoken text is “The Red Cedar runs through campus.” Descriptive audio might say, “Water is shown rushing by the MSU Library in spring. The Red Cedar runs through campus.”

### Interactive Video

Video with which a user can interact, like a training module, must be navigable using the keyboard. To test this, put your mouse away and use:

- Tab key or arrow keys to move to an item, like a link or button
- Arrow keys to scroll through an item, like a bulleted list or dropdown
- Enter key or spacebar to select a link, button, or option in a radio button or dropdown

Such videos are usually created by an external vendor. Send the screen back to them to be fixed.

### Never...

Never place important information where closed captioning can obscure it. (See below)

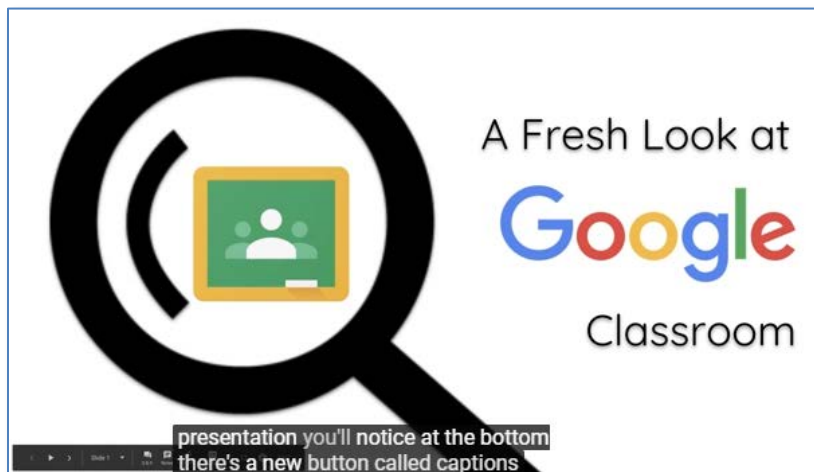


Figure 1: Example of Closed Captioning text covering the Captions button reference in the audio. Ironically, this Google presentation is about the proper way to add Closed Captioning.

# Finishing a Document (Check Accessibility & Output to PDF)

## Step 1: Checking Accessibility in Microsoft

Make sure your document passes the accessibility checker in the Microsoft program you use to create and edit it.

As you move through the items in the results, the editor will take you to the item to fix. Once corrected, the results will update automatically.

## Step 2: Converting Documents to PDF

It is highly desirable when distributing documents by email that the content be placed on a website. If for some reason that is not feasible, distributing the document in its original format is best. Sometimes it may be appropriate to convert the document to a Portable Document Format (PDF).

However, correcting accessibility issues is beyond the ability of most people unless they are highly skilled with Adobe Acrobat Professional. So, if conversion to a PDF is necessary, fix it in Microsoft first.

Speaker notes in MS PowerPoint can be converted into the PDF as a comment. Use the "Options" button when you "Save as PDF". Adobe PDF Maker versions may prompt with this option without using the Option button.

## Step 3: Running Accessibility Checker in Adobe Acrobat Professional

Once you have output the document to PDF, open it with Adobe Acrobat Professional and run the accessibility checker there. It may give additional information you need to change in the source document.

This feature is NOT available in Adobe Reader.

### Common Issues

#### Missing Title in Adobe Acrobat

Typically, you will be prompted that the document is lacking a title. Direction for adding a title are at right.

## Directions for Finishing a Document

Tool	How do I?
Word	<p><b>RUN ACCESSIBILITY CHECK</b></p> <p>Choose the <b>Review</b> tab in the ribbon bar, then Select <b>Check Accessibility</b>.</p>
	<p><b>SAVE AS PDF</b></p> <p>Choose <b>File</b> in the toolbar. In the left pane, choose <b>Save as Adobe PDF</b>.</p>
Excel	<p><b>RUN ACCESSIBILITY CHECK</b></p> <p>Choose the <b>Review</b> tab in the ribbon bar, then Select <b>Check Accessibility</b>.</p>
	<p><b>SAVE AS PDF</b></p> <p>From the menu bar, choose <b>File</b> then <b>Save as</b> Choose <b>PDF</b> as the file type, then the <b>More options...</b> link. In the Save As dialog box, choose the <b>Options</b> button. In the Options dialog, make sure <b>Document structure tags for accessibility</b> is checked. Do not use "Save as Adobe PDF"</p>
PowerPoint	<p><b>RUN ACCESSIBILITY CHECK</b></p> <p>Choose the <b>Review</b> tab in the ribbon bar, then Select <b>Check Accessibility</b>.</p>
	<p><b>SAVE AS PDF</b></p> <p>Choose <b>File</b> in the toolbar. In the left pane, choose <b>Save as Adobe PDF</b>. See instruction at left for converting "Speaker Notes."</p>
OmniUpdate	<p><b>RUN ACCESSIBILITY CHECK</b></p> <p>Select the Page Check icon (checkmark) in the toolbar. Then select <b>Show Results</b>. Scroll through the list to see if any of your content is included.</p> <p>The results may show issues in the header and footer. These issues are not perceivable to users.</p>
Adobe Acrobat Pro	<p><b>RUN ACCESSIBILITY CHECK</b></p> <p>View, Toolsets, Accessibility. Choose Accessibility Full Check. Keep the defaults, then choose "Start Checking." Results show at left.</p> <p><b>ADD A TITLE</b></p> <p>Choose <b>File</b> in the toolbar, then Properties. On the Description tab, make sure the name is showing in the Title field. On the Initial View tab, change the Show dropdown to "Document Title."</p>

# Appendix I: Color Contrast

The requirement: Over 4.5:1 contrast!!!

Text must meet a contrast between the font color and background color of 4:5.1. This is the MINIMUM standard.

Larger font, 14 point or over, or bold font, may meet a lower standard of 3.0:1. Also, adjoining colors (such as a header background against a page background) must also meet this standard.

Background	Size	#CB5A28	#6E005F	#94AE4A	#C89A58	#E8D9B5	#D1DE3F	#535054	#909AB7	#008183	#F08521	#97A2A2	#0DB14B	#18453B	#000000	#FFFFFF
#FFFFFF (255,255,255)	Text		11.5:1					7.9:1		4.7:1				10.8:1	21.0:1	
	Large Text	4.2:1	11.5:1					7.9:1		4.7:1				10.8:1	21.0:1	
#000000 (0,0,0)	Text	5.0:1		8.4:1	8.2:1	15.0:1	14.2:1				8.1:1	8.0:1	7.4:1			21.0:1
	Large Text	5.0:1		8.4:1	8.2:1	15.0:1	14.2:1			4.5:1	8.1:1	8.0:1	7.4:1			21.0:1
#18453B (24,69,59)	Text					7.7:1	7.3:1									10.8:1
	Large Text			4.3:1	4.2:1	7.7:1	7.3:1		3.8:1		4.1:1	4.1:1	3.8:1			10.8:1
#0DB14B (13,177,75)	Text														7.4:1	
	Large Text		4.1:1											3.8:1	7.4:1	
#97A2A2 (153,162,162)	Text							3.0:1								8.1:1
	Large Text		4.4:1					3.0:1						4.1:1	8.1:1	
#F08521 (244,133,33)	Text															8.1:1
	Large Text		4.4:1					3.1:1						4.1:1	8.1:1	
#008183 (0,129,131)	Text															4.7:1
	Large Text					3.4:1	3.2:1								4.5:1	4.7:1
#909AB7 (144,154,183)	Text															7.5:1
	Large Text		4.1:1											3.8:1	7.5:1	
#535054 (83,80,84)	Text					5.7:1	5.4:1									7.9:1
	Large Text			3.2:1	3.1:1	5.7:1	5.4:1				3.1:1	3.0:1				7.9:1
#D1DE3F (209,222,63)	Text		7.8:1					5.4:1						7.3:1	14.2:1	
	Large Text		7.8:1					5.4:1		3.2:1				7.3:1	14.2:1	
#E8D9B5 (232,217,181)	Text		8.2:1					5.7:1						7.7:1	15.0:1	
	Large Text		8.2:1					5.7:1		3.4:1				7.7:1	15.0:1	
#C89A58 (200,154,88)	Text															8.2:1
	Large Text		4.5:1					3.1:1						4.2:1	8.2:1	
#94AE4A (148,174,74)	Text		4.6:1													8.4:1
	Large Text		4.6:1					3.2:1						4.3:1	8.4:1	
#6E005F (110,0,90)	Text			4.6:1		8.2:1	7.8:1									11.5:1
	Large Text			4.6:1	4.5:1	8.2:1	7.8:1		4.1:1		4.4:1	4.4:1	4.1:1			11.5:1
#CB5A28 (203,90,40)	Text														5.0:1	
	Large Text													5.0:1	4.2:1	

# Resources

## Additional Guidance

---

### Adobe

[Adobe InDesign Accessibility](https://adobe.com/accessibility/products/indesign.html) (adobe.com/accessibility/products/indesign.html)

[Creating accessible PDF documents with Adobe InDesign CS6](https://adobe.com/content/dam/acom/en/products/indesign/pdfs/creating-accessible-pdf-documentw-with-adobe-indesign-cs6-v3.pdf)

(adobe.com/content/dam/acom/en/products/indesign/pdfs/creating-accessible-pdf-documentw-with-adobe-indesign-cs6-v3.pdf)

### Facebook and Twitter

[Facebook: How do I edit the alternative text for a photo?](https://facebook.com/help/www/214124458607871) (facebook.com/help/www/214124458607871)

[Twitter: How to make images accessible for people](https://help.twitter.com/en/using-twitter/picture-descriptions) (help.twitter.com/en/using-twitter/picture-descriptions)

### GSA Government-Wide IT Accessibility Program

[Section508.gov](https://section508.gov) (section508.gov)

### User Experience and Accessibility Workgroup: How to Contact Us

[HR User Experience](mailto:HR.UserExperience@campusad.msu.edu) (HR.UserExperience@campusad.msu.edu)

### Web Accessibility | Michigan State University

[Web Accessibility](https://webaccess.msu.edu) (webaccess.msu.edu)

### Web Accessibility Initiative

[Web Content Accessibility Guidelines \(WCAG\)](https://w3.org/WAI/standards-guidelines/wcag/) (w3.org/WAI/standards-guidelines/wcag/)

## Software Resources

---

### The Paciello Group

[Colour Contrast Analyser](https://developer.paciellogroup.com/resources/contrastanalyser/) (developer.paciellogroup.com/resources/contrastanalyser/)

### W3schools.com

*Find color tints and shades that may have better contrast.*

[HTML Color Picker](https://w3schools.com/colors/colors_picker.asp) (w3schools.com/colors/colors\_picker.asp)

### NV Access

*The NVDA screen reader is a commonly used and free screen reader. It works best with Mozilla Firefox.*

[NVDA Screen Reader download](https://nvaccess.org/download/) (nvaccess.org/download/)

## Training

---

[Deque University](https://dequeueuniversity.com) (dequeueuniversity.com)

[WebAIM](https://webaim.org/training/) (webaim.org/training/)

[Section508.gov](https://section508.gov/training) (section508.gov/training)

[Lynda.com](https://lynda.com) (lynda.com)