



ADA Compliant PowerPoints

Checklist

Here is a quick checklist for creating ADA compliant PowerPoints. You can click on each one for a more detailed description.

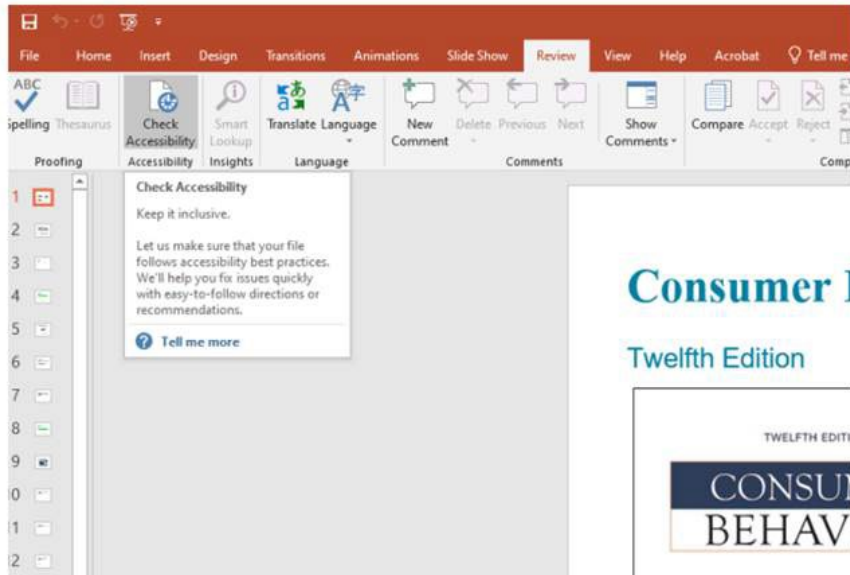
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Reading Order

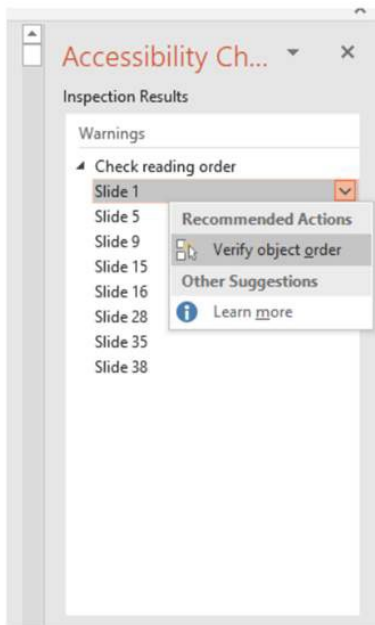
The reading order is how a screen reader will read out a slide to a user. You want to make sure the order is correct as to not cause confusion for the screen reader user.

Checking Reading Order

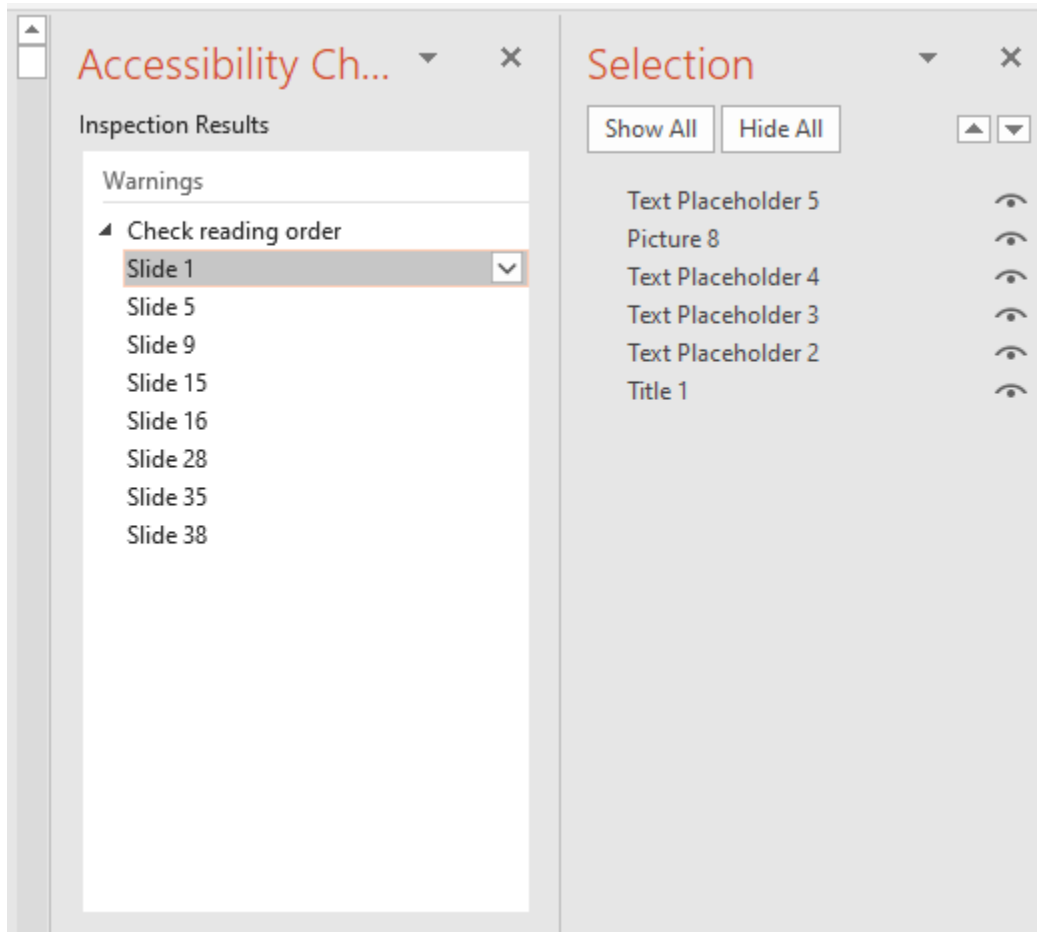
To check the reading order, at the top of your screen go to “Review” and then choose “Check Accessibility.”



A window will pop open on the right side and will show you which slides you should check the reading order for. From here, click the drop-down arrow next to the first slide on the list and choose “Verify Object Order.”



You can now see the reading order of your slide. ***It reads from bottom to top.** In the screenshot below, it will read Title 1, then Text Placeholder 2, then Text Placeholder 3, etc... You can click on each object for it to highlight inside the slide to show where it is. Once you checked that slide, you can click to the next slide in the list and the reading order should stay open. If it doesn't, click the drop down again to select verify object order.

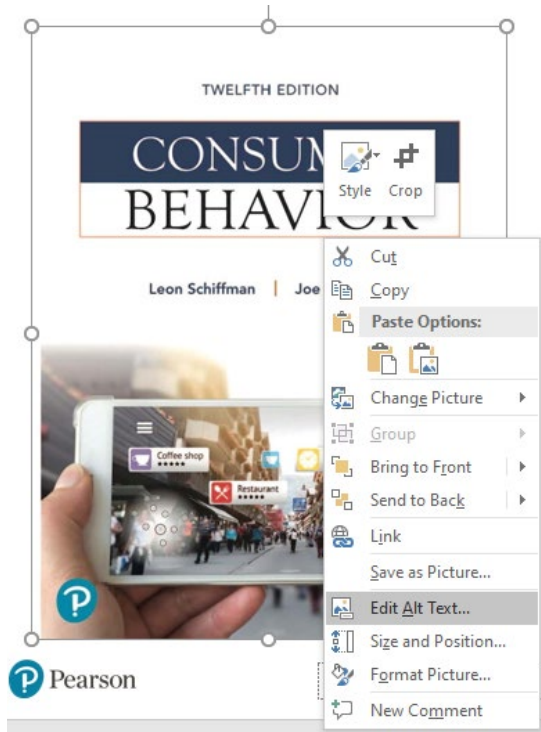


Alternate Text for Images

When thinking about good design, visual elements are always a huge factor. This can cause issues for those using assistive technology. This is where alternate text, also known as “alt text,” comes into play. Alt text is used as a detailed description of an image. You want to describe the image as if you were explaining it to a blind person, pointing out the important and relevant parts of the image. If you are using an image for decoration purpose only and the image has no relevant information, you can use the “Mark as Decorative” option. ***ALL images should have some form of alt text or is marked as decoration.**

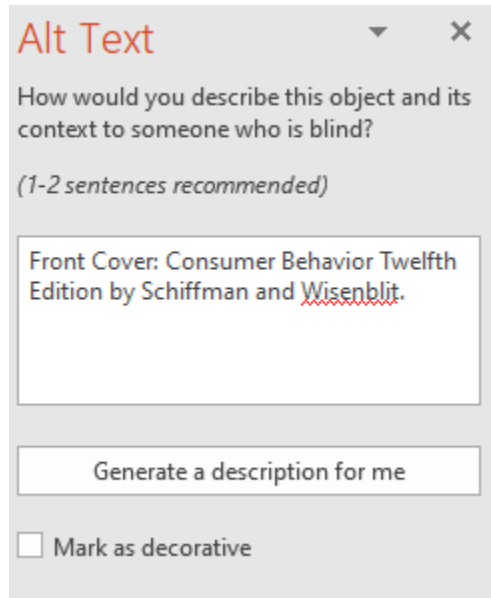
Assign Alt Text:

To assign alt text to an image, right click on the image. In the menu that appears, click on “Edit alt text.” Another option is to click on the image, then select the format tab in the tool bar and choose “alt text.”



Alt Text Panel:

A panel will appear on the right side of your PowerPoint document. This is where you will enter your alt text or choose the mark as decorative option. There is also the option “Generate a description for me.” I would avoid this option as it does not insert acceptable alt text. If you decide to use this, be sure to edit any description to fully and correctly match your image.



Best Practice: It is recommended to put no more than 140 characters in the alt text box. If your description of the image is longer than 140 characters, put the description under the image and, inside the alt text box, put “Image description below image.”

Reminder: Mark as decorative is **ONLY** for images that convey no information; Images that are only used for a design purpose. If the image has any information that you want the students to have, it **MUST** have detailed alt text.

Unique Slide Titles and Blank Slide Option

Every slide needs to have its own, unique title. A screen reader user has the option to view the slides by just the title and can use this as navigation. The title should be at the top of the slide and the first thing read out to the user (see Reading Order). There are some work arounds if you want to use the same title for multiple slides. For example, you have three slides and the title for all three are “Successful Relationships.” By putting (1 of 3) behind Successful Relationships in the first slide, (2 of 3) for the second slide and (3 of 3) for the third slide, this makes them unique slide titles.

Successful Relationships (1 of 3)

Successful Relationships (2 of 3)

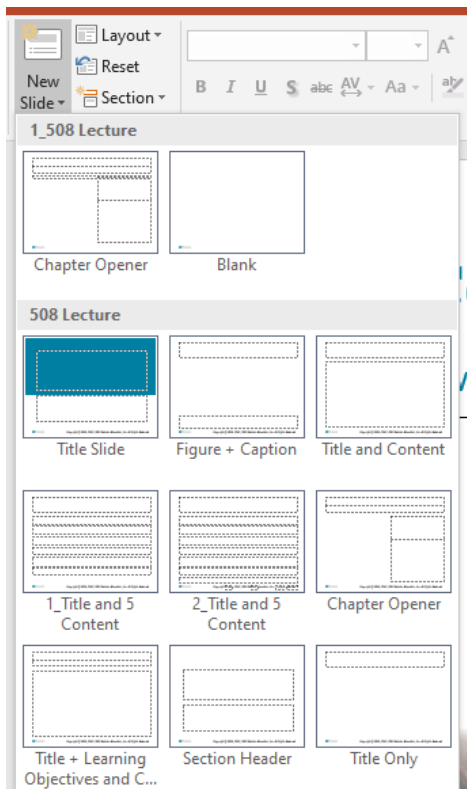
Successful Relationships (3 of 3)

Avoid Blank Slide Option

When it comes to creating a new slide in your PowerPoint, you want to avoid choosing the blank slide option. The screenshot below highlights the quick way to insert a blank slide. Please avoid this option as a blank slide comes with no built-in accessibility.



Instead, choose “New Slide” and then pick one of the slide templates provided to you by PowerPoint. The templated slides are there to help you with accessibility as they already come with correct reading order and a Title section. Title sections cannot be added into a blank slide and every slide requires a title section. If you are fixing a blank slide, you will need to convert it into a templated slide so it has a title section.



Descriptive Hyperlinks

Those that use assistive technology have the option to view a full list of links available in a PowerPoint. Using descriptive links is important so the user knows where the link is taking them and why. You want to avoid putting in a full URL because a screen reader will read out the “h t t p : / /” and that can be frustrating to the user. Descriptive hyperlinks tell the user what the link is about while also being short and to the point!

***ALL links must be descriptive hyperlinks with the exception of links in the resource section.**

Example Hyperlink

For this example, I want to insert a link to our faculty resource page on the MSUTexas website.

Instead of putting in the URL, which looks like this:

<https://msutexas.edu/distance/online-teaching-aids.php>

I am going to put it as a descriptive hyperlink, which looks like this:

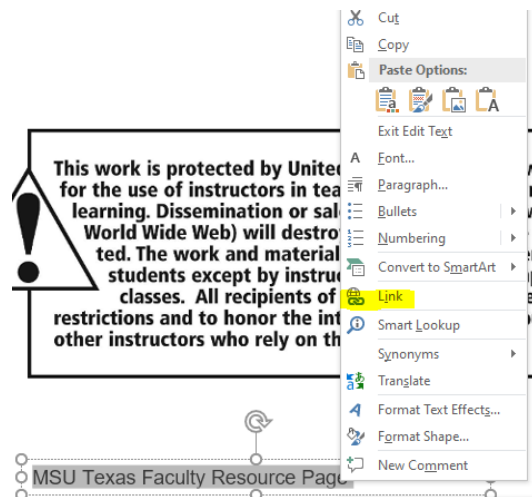
[MSUTexas Faculty Resource Page](#)

This makes it a much shorter link and tells me exactly where I am going.

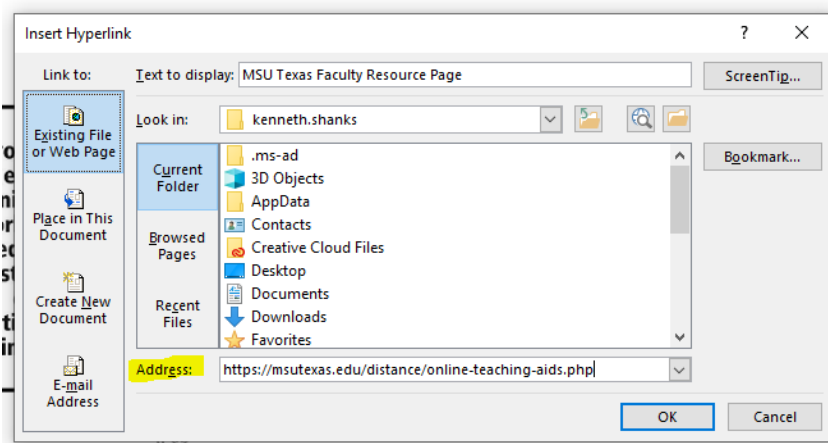
Note: Do not use general phrases like “Click here” or “Read More” or “Learn More” for your descriptive text as this will give the learner no information about the link.

Inserting a Descriptive Hyperlink

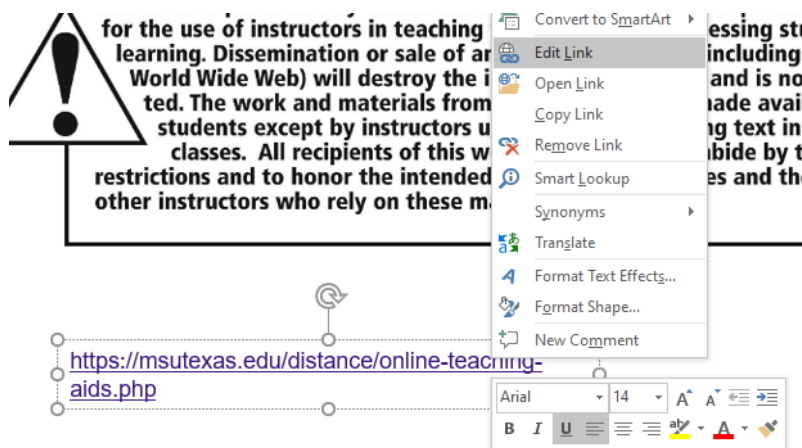
To insert a link, you’ll want to type out the description that you want the link attached to. Once that is in place, highlight the description and then right click and choose “link.”



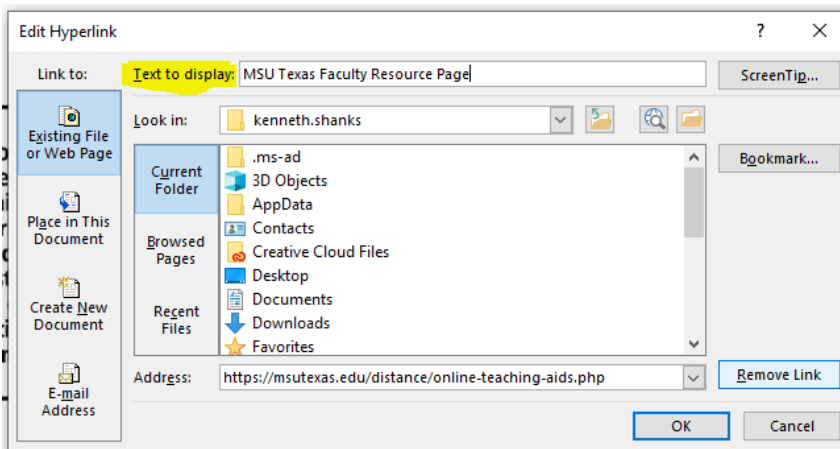
A new window will appear. Paste your link into the “address” section and then press okay. Your text will now be a link, appear blue, and underlined.



If you already have the hyperlink in the PowerPoint, you can change the text that it displayed. Right click your hyperlink and choose “Edit Hyperlink.”



A new window will appear. In the Text to display box, put in the description for the hyperlink and press okay.

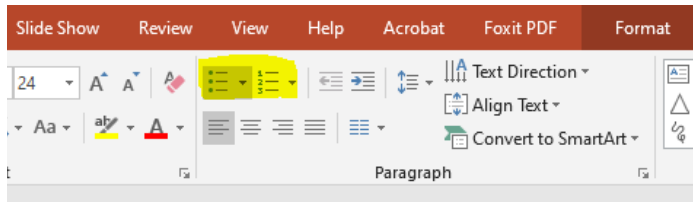


Lists

Lists are extremely helpful for those using assistive technology. It gives the user cues about the beginning of the list and the movement when going from one list item to another. Lists are also extremely valuable for visual learners and great for overall design.

List Styles

To create a list, simply highlight the text of choice and choose one of the two list style options under the Paragraph section on your toolbar. Once the list is created, you can verify that it is a list by clicking anywhere inside of the list and you will see that one of the list styles will be grayed. This means that the list is utilizing that style.



Determinants of Site Success

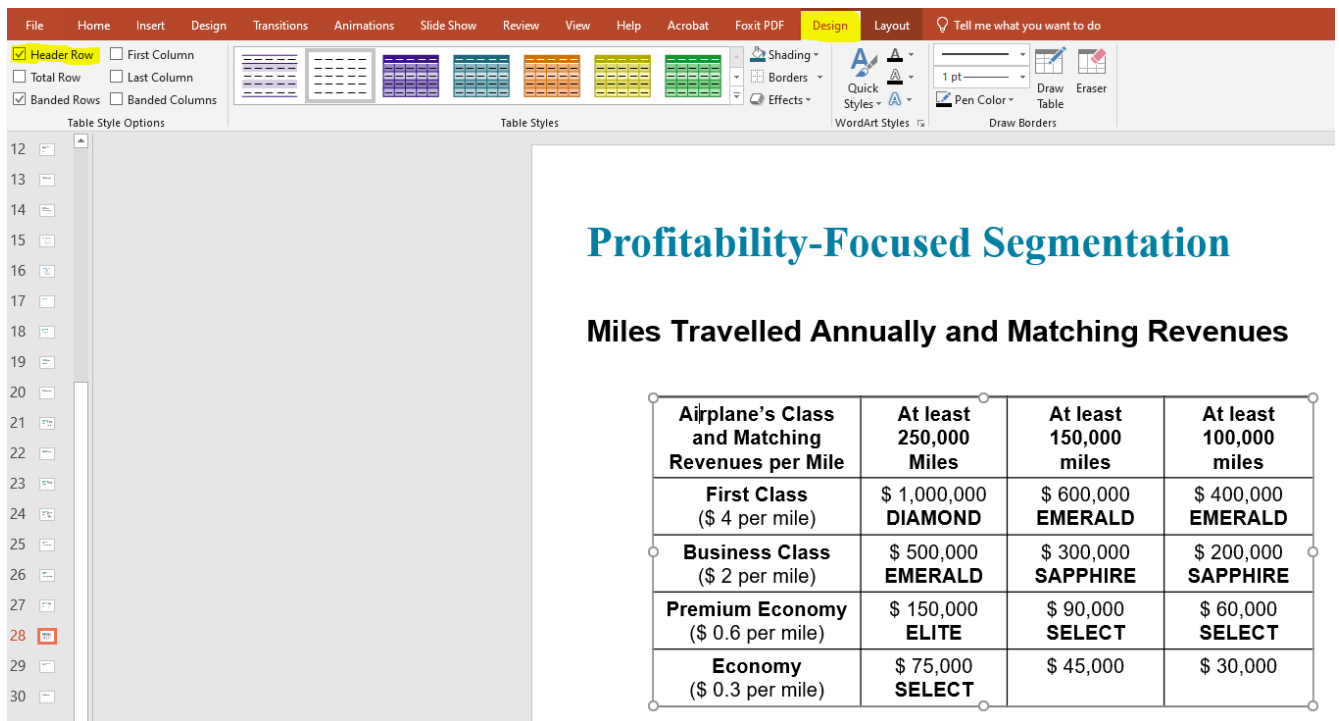
- Adaptation
- Interactivity
- Nurturing
- Commitment
- Network
- Assortment

Tables

Tables can be extremely challenging to assistive technology users if they are not set up correctly. ***You want to be as simple as possible when creating a table.** Tables need to include a header row, have no merged cells, and have no blank cells unless the table is being used for a student to fill the information in themselves.

Header Row

To make sure the table has a header row marked, click anywhere inside the table and go to the “Design” tab on the top toolbar. In the top left corner of the design toolbar you will see “Header Row” with a box next to it. Make sure the box is checked. This makes the first row of your table the header row. PowerPoint does not work well with very complex tables so be as basic as possible if you use a table.



The screenshot shows the PowerPoint Design tab with the 'Header Row' checkbox checked. Below the ribbon, a table titled 'Profitability-Focused Segmentation' is displayed. The table has four columns: 'Airplane's Class and Matching Revenues per Mile', 'At least 250,000 Miles', 'At least 150,000 miles', and 'At least 100,000 miles'. The rows represent different airplane classes: First Class, Business Class, Premium Economy, and Economy, each with its corresponding revenue per mile and the corresponding tier names for each mileage category.

Airplane's Class and Matching Revenues per Mile	At least 250,000 Miles	At least 150,000 miles	At least 100,000 miles
First Class (\$ 4 per mile)	\$ 1,000,000 DIAMOND	\$ 600,000 EMERALD	\$ 400,000 EMERALD
Business Class (\$ 2 per mile)	\$ 500,000 EMERALD	\$ 300,000 SAPPHIRE	\$ 200,000 SAPPHIRE
Premium Economy (\$ 0.6 per mile)	\$ 150,000 ELITE	\$ 90,000 SELECT	\$ 60,000 SELECT
Economy (\$ 0.3 per mile)	\$ 75,000 SELECT	\$ 45,000	\$ 30,000

Merged or Blank Cells

Merged cells can cause issues for screen readers when it comes to lining up with the header row. Below is an example of a merged cell. ***Do not use merged cells!**

Week or Module	Activities/Assignments/Exams	Due Date
Week 1	Detailed instructions on the Activities and Assignments	Clearly posted Due Dates
Week 2	Detailed instructions on the Activities and Assignments	Clearly posted Due Dates
THANKSGIVING		
Week 4	Detailed instructions on the Activities and Assignments	Clearly posted Due Dates

Blank cells also cause issues for screen readers. A blank cell can cause confusion and lead to the user losing their place inside of the table. The user would then have to repeat the table to understand why there was a blank space. Best practice for a blank cell is to put either “N/A” or another type of signifier that tells the screen reader that there is nothing in that cell. You can use blank cells if you are creating a table that the student has to fill in information themselves.

Video and Audio Files

Video

Videos require two things: Closed Caption and Descriptive Audio.

Closed Caption

The video must have closed captions. I would not recommend adding the video directly into the PowerPoint. Instead, I would link in a video from an outside source, such as YouTube. If your videos are inside of D2L, they cannot be linked into a PowerPoint. YouTube videos would be best for a PowerPoint, just make sure the video you are wanting to use has closed captions.

Descriptive Audio

The video should have descriptive audio. This means that the person speaking is explaining every thing they are doing in the video. The narrators typically describe actions, gestures, scene changes, and other visual information. They also describe titles, speaker names, and other text that may appear on the screen. This is important as a blind user will not get this information unless they hear it from the person speaking. Any important information you want a student to receive from a video, it must be spoken aloud.

Audio

If you provide audio only files, such as podcasts or speeches, you must offer a text transcript. This ensures that deaf or hard-of-hearing users can access the content.

Make the transcript accurate, synchronized (if possible), and easy to locate on the same page.

Color Contrast

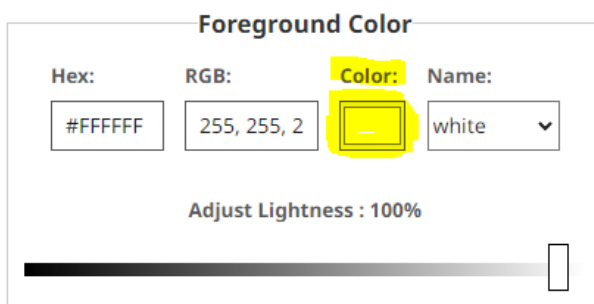
Color can be important to overall design but can cause issues for those with visual impairments or those who are colorblind. If you are using color, be sure to pick colors with high contrast. The rule to meet WCAG AA standards is a contrast of 4.5:1 for font below 18 points and 3:1 for font 18 points and above. ***There are ways to check your contrast, which I will describe below, but if you want to avoid having to check each time then focus on having a light color font on a dark background or a dark color font on a light background.** The more contrast, the better!

Checking Color Contrast

To check the contrast of a color, you will want to use [Deque's Color Contrast Analyzer](#).

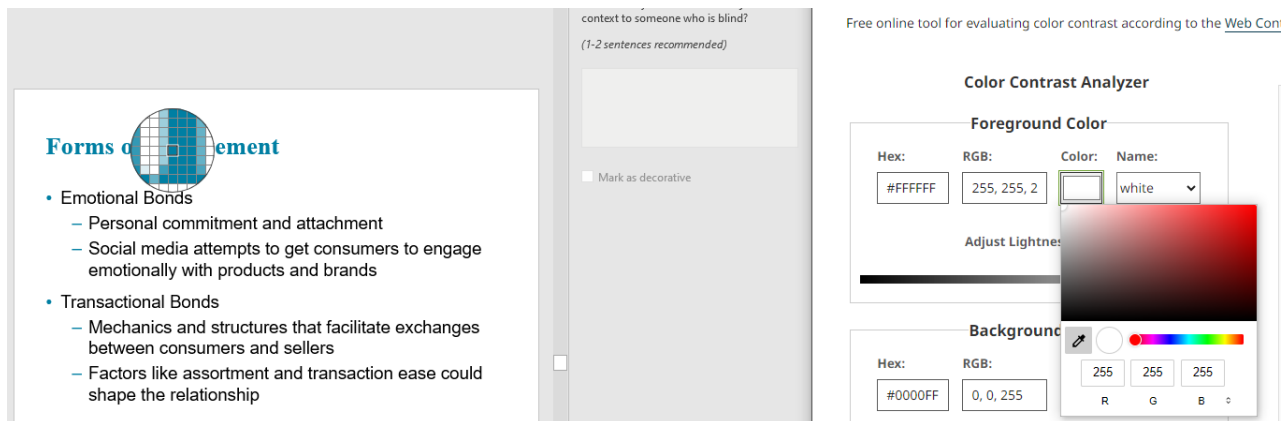
This website has three important areas: the foreground color, the background color, and the results.

To change the color of the foreground and background, click on the box below the words "Color."



The screenshot shows the 'Foreground Color' section of the Deque's Color Contrast Analyzer. It includes input fields for Hex (#FFFFFF), RGB (255, 255, 2), Color (a yellow color swatch), and Name (white). Below these is a slider for 'Adjust Lightness : 100%'.

This will open a small window where you can pick your color. Click on the little dropper. This will allow you to use the dropper to select the color in your PowerPoint. It will give you a magnifying circle that you use to hover over the color in your PowerPoint. You will want to select the darkest color when using the dropper. Repeat this for the background color.




The composite image illustrates the application of color contrast principles. On the left, a PowerPoint slide titled 'Forms of Commitment' lists 'Emotional Bonds' and 'Transactional Bonds' with their respective descriptions. In the center, a prompt asks for 'context to someone who is blind?' with a recommendation of '(1-2 sentences recommended)'. On the right, the Deque's Color Contrast Analyzer interface is shown, featuring a 'Color Contrast Analyzer' section with foreground and background color selection tools, including a color picker and a lightness adjuster.

Once you have selected both your foreground and background colors, you will see the results. Your goal is to have the ratio be equal to or higher than 4.5:1. In the example below, the color we used has a 4.6:1 ratio, which is compliant. Our goal is to meet AA standards. If your color meets AA but does not meet AAA, it is still compliant.

Foreground Color

Hex:	RGB:	Color:	Name:
<input type="text" value="#007FA3"/>	<input type="text" value="0, 127, 163"/>	<input type="color" value="#007FA3"/>	<input type="text" value=""/>


Adjust Lightness : 100%

A horizontal slider bar with a gradient from dark blue to light blue. A white rectangular handle is positioned at the far left end, indicating 100% lightness.

Background Color

Hex:	RGB:	Color:	Name:
<input type="text" value="#FFFFFF"/>	<input type="text" value="255, 255, 2"/>	<input type="color" value="#FFFFFF"/>	<input type="text" value="white"/>

Adjust Lightness : 50%

A horizontal slider bar with a gradient from black to white. A white rectangular handle is positioned at the far right end, indicating 50% lightness.

Result

Small sample text.

Large sample text.

Contrast Ratio = 4.60:1

WCAG Standard	Small Text	Large Text, UI Components, & Graphical Objects
AA	Pass	Pass
AAA	FAIL	Pass

Emphasized Messages

If you are trying to portray an important message to your students using **Bold**, *Italic*, Underline, CAPS, **Highlight**, or **Color** screen readers will not pick these up. To help the screen reader know that you are giving out important information, put a * in front of the message. So now it will be ***Bold**, **Italic*, *Underline, *CAPS, ***Highlight**, or ***Color**. ***It is up to your discretion if the message is important enough to earn a * or not.**

Here are a couple examples of sentences:

- ***ALL** homework is due by the end of Friday.
 - This sentence seems very important, it should get a * in front of ALL as it is underlined and in caps.
- There will be **SOME** people who do not want to wake up that early.
 - This sentence is not very important and the word **SOME**, even though it is in caps and bold, was used as a minor emphasis so it does not need a *.
- Messages in color should almost always have a * with it unless the color is the main font of the PowerPoint or document. For example, if I put one sentence in red but all my other font is black then it needs a *. If my entire PowerPoint font is in a dark blue, there is no emphasis to be had so it does not need a *.

Transitions and Animations

Transitions should be kept simple and avoid complex or automatic effects that could be distracting or difficult for assistive technologies. Transitions should not be used as the primary way to convey information and the duration should be brief (under 3 seconds). Avoid flashing, zooming, or spinning transitions, and ensure animations do not hinder the ability to read content.

- **Keep it Simple**
 - Simpler transitions are generally better for accessibility. Complex transitions can be difficult for screen readers to interpret and can also be distracting for individuals with cognitive disabilities.
- **Avoid Automatic Transitions**
 - Automatic transitions where slides advance at set intervals can be problematic, especially for those who may need more time to read or process the information on a slide.
- **Brief Duration**
 - Transitions should be quick and unobtrusive. While some transitions can be useful for breaking up monotony, it's best to keep them brief (under 3 seconds) to avoid disrupting the flow of information.
- **Avoid Distracting Effects**
 - Avoid transitions that flash, zoom, spin, or otherwise create visual distractions that could interfere with comprehension or accessibility.
- **Ensure Animations Do Not Hinder Content**
 - If animations are used, they should not obscure or remove important content from a slide.
- **Do Not Rely on Transitions and Animations for Information**
 - Transitions and animations should not be used as the primary way to convey information. The main content of the slide should be easily accessible and understandable without relying on transitions and animations.

Math Equations

Math can be extremely difficult for screen reader users, especially if the document is not set up with them in mind. There are two options for providing ADA compliant math problems.

Option 1: Using images of math equations

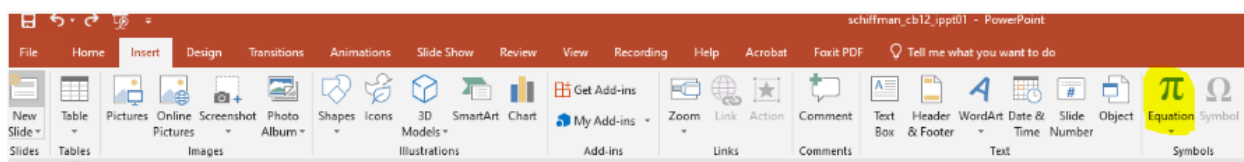
If you choose this option you have to give the images extremely detailed alt text. This option would work best for simple equations. Often times you will want to convert symbols into words for the alt text.

For example: instead of using 3 x 2 in the alt text, you write it as 3 multiplied by 2.

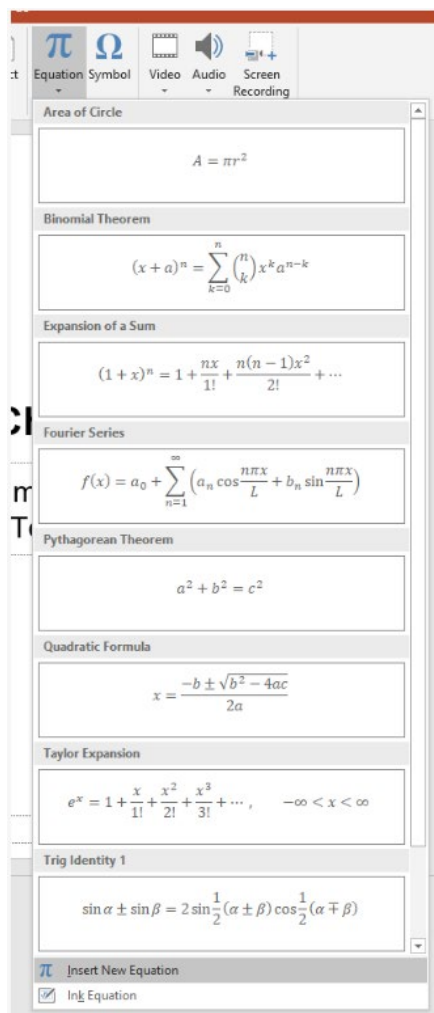
*Note: All images of math problems must have ***detailed** alt text.

Option 2: Using the built in PowerPoint math equation tool

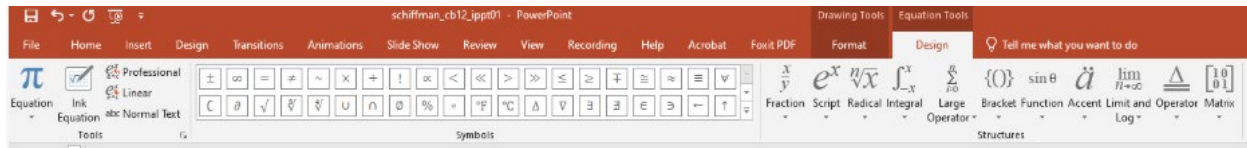
This option is best for complex equations. You can find the equation tool under the Insert tab. They will be on the far right of this tool bar.



You can choose a built-in equation or start a new one via the "Insert New Equation."



Once you choose an equation you can click anywhere inside the equation. Doing this will provide you with a new toolbar that has many more math related options.



The perk of using this option is that PowerPoint will have built-in alt text for math equations used via the equation tool.

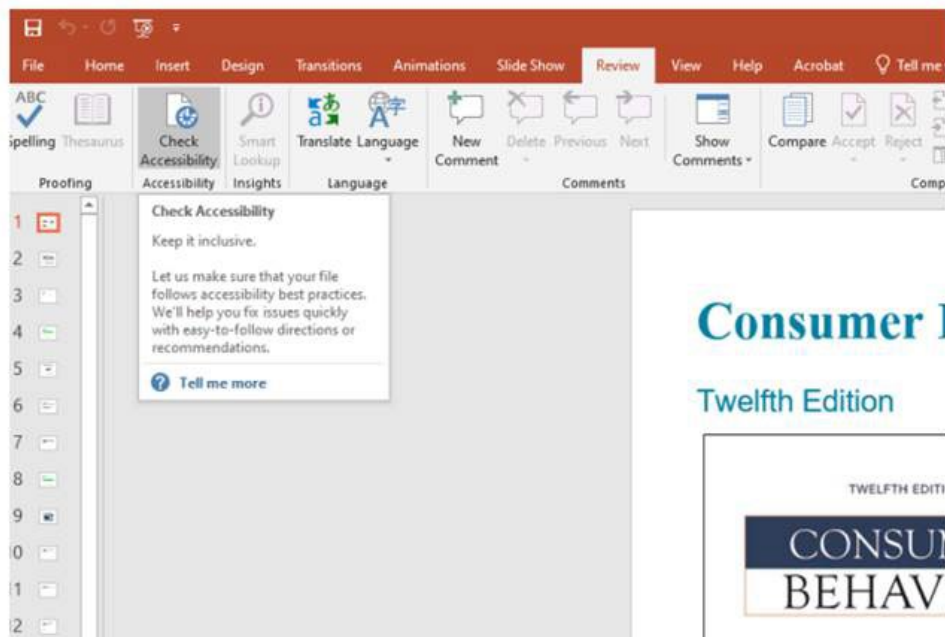
MathML

You could look into [MathML](#), which is a mathematical markup language for describing notation. The website provided will give you more information and includes tutorials and guides. MathML would be a great tool to learn if you use math a lot in your online courses.

Accessibility Checker

PowerPoint does have an accessibility checker but it is not very accurate when it comes to all the compliance requirements. While I do recommend using it to see if you missed something, I would not rely solely on it.

The accessibility checker can be found under the “Review” section on the top tool bar. After selecting “Check Accessibility” your results will show up in a window on the right side. PowerPoint will inform you of any mistakes it catches and give you information on how to correct it.



Document Title and Saving

Document Title

Each file must have a descriptive title set in the properties. Document titles allow the user to know what the file is going to be about before they open it. If it is opened in a browser window, the name of that window will be taken from the document title. This will help the student recognize which browser window belongs to the file they just opened.

To insert a document title, you go to File on the toolbar. Once this opens, it should default to opening the Info tab. If not, click on the Info tab. You will insert a title on the right side of this screen, in the title box. Do not forget, this needs to be a descriptive title that lets the user know what the file is about based on the title you provide.



Here are some examples of good descriptive file names for a PowerPoint:

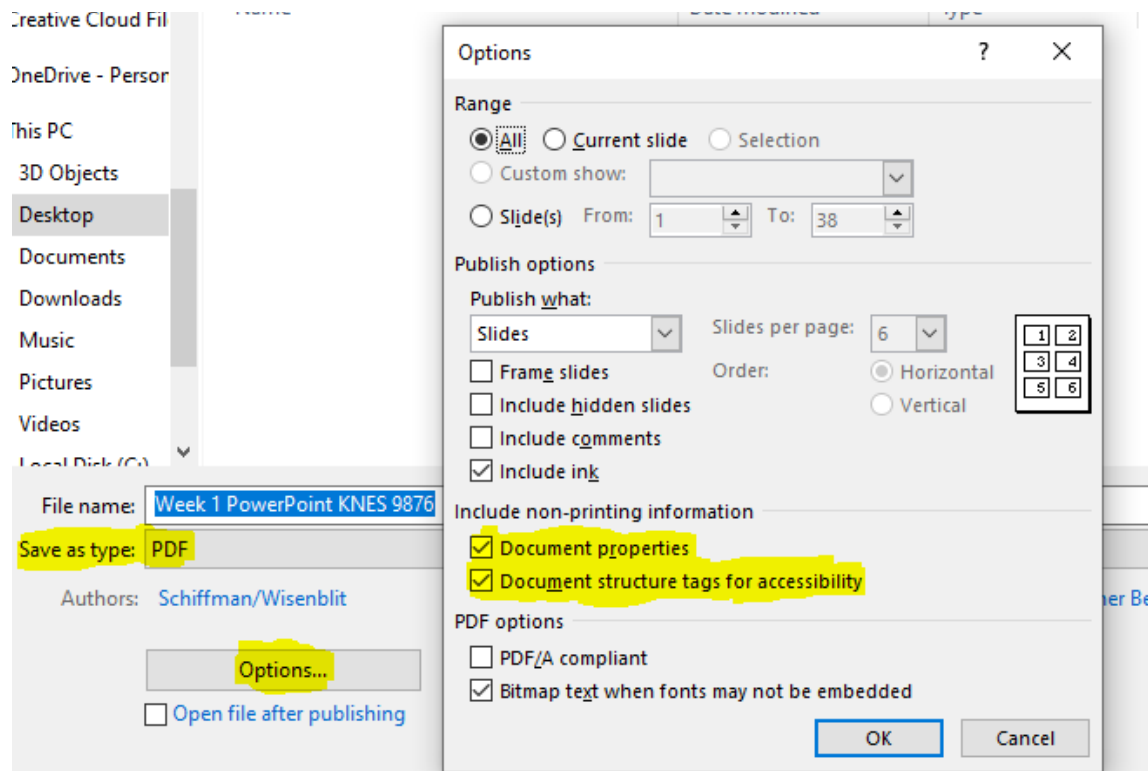
- KNES 9876 Chapter 1 PowerPoint
- ADA Compliance Week 2 PowerPoint
- The Fall of Rome PowerPoint

***Note:** A descriptive file name will work to complete this criterion but the Ally checker in D2L only checks for document title. To avoid seeing that issue in Ally, use document title over descriptive file name, or use both!

Saving

Once you are finished with your PowerPoint document, I recommend saving it both as a PowerPoint document and as a PDF. Either file type can be posted to D2L but PDF is much more universal. To save, go to File -> Save As. Choose your location. First, I save it as a PowerPoint file, as it is easier to come back and make corrections. When you are ready to save it as a PDF, click the drop down next to "Save as type" and choose PDF. Click into the options menu and verify that "Document properties" and "Document structure tags for accessibility" are checked. Hit save once finished. Saving this way will also save all compliance.

***Note: Do NOT save through the "Print" option as this does not save compliance.**



Additional Assistance

If you need additional assistance, have ADA related questions, or would like to verify that you created an accessible PowerPoint document, send an email to zack.shanks@msutexas.edu.

Created By:

Office of Accessibility and Instructional Design

Distance Education

Midwestern State University