



DESIGNING FOR ALL PowerPoint & Google Slides Accessibility

Naira Tumanyan

Agenda

- Power Point Accessibility basics
- Microsoft Accessibility Checker
- Grackle Slides













Physical and cognitive diversity

Disability

- Everyone has abilities and limits.
- Disabilities exist in various forms: mobility, visual, auditory, and cognitive impairments.
- Disability can be permanent, temporary, and situational.
- Recognize disability as an integral part of the human experience and intentionally implement practices to eliminate barriers.

Neurodivergence

- ADHD
- Autism
- Dyslexia, Dyscalculia, Dysgraphia
- Epilepsy
- Obsessive-compulsive disorder (OCD)
- Traumatic brain injury

	Permanent	Temporary	Situational
Touch	 One arm	 Arm injury	 New parent
See	 Blind	 Cataract	 Distracted driver
Hear	 Deaf	 Ear infection	 Bartender
Speak	 Non-verbal	 Laryngitis	 Heavy accent

Templates and headings

✓ Did the template I use come with built-in title and content placeholders?

- Title template slide has a built in Heading Level 1 (H1)
- All other slides are Heading Level 2 (H2)

1 Designing for All: Document Accessibility Essentials Naira Tumanyan

2 Today's Agenda

- Disability, accessibility, and digital content
- Document structure, hierarchy & styling
- Typography
- Navigation
- Color
- All Text
- Microsoft Accessibility checker

3 Introduction

1 in 4 adults in the US has some type of disability (Source: CDC)

90.9% of one million home pages had distinct Web Content Accessibility Guidelines (WCAG) 2 failures (Source: WebAIM)

Category	Percentage
Visual	85.9%
Text	14.2%
Audio	7.7%
Video	6.2%
Form	6.8%
Other	3.8%

4 Embrace diversity

Everyone has abilities and limits.

Disabilities exist in various forms: mobility, visual, auditory, and cognitive impairments.

Disability can be permanent, temporary, and situational.

Recognize disability as an integral part of the human experience and intentionally implement practices to eliminate barriers.

Design for physical and cognitive diversity.

Accessibility
Screen readers, display

Digital Wellbeing & pare
Screen time, app timers, bec

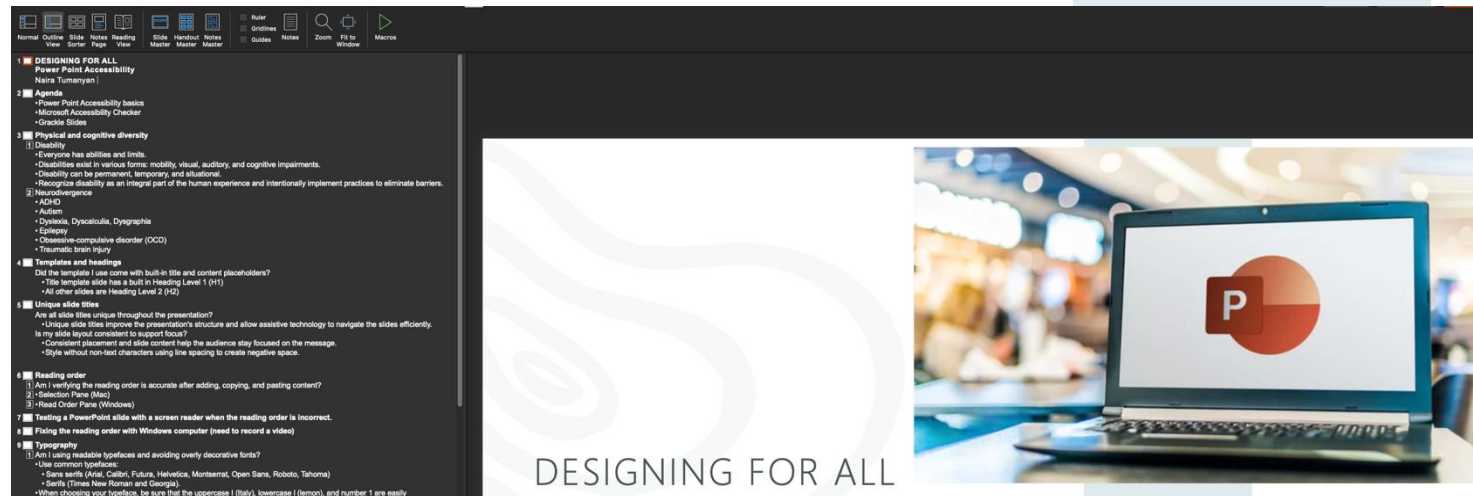
Unique slide titles

✓ Are all slide titles unique throughout the presentation?

- Unique slide titles improve the presentation's structure and allow assistive technology to navigate the slides efficiently.

✓ Is my slide layout consistent to support focus?

- Consistent placement and slide content help the audience stay focused on the message.
- Style without non-text characters using line spacing to create negative space.

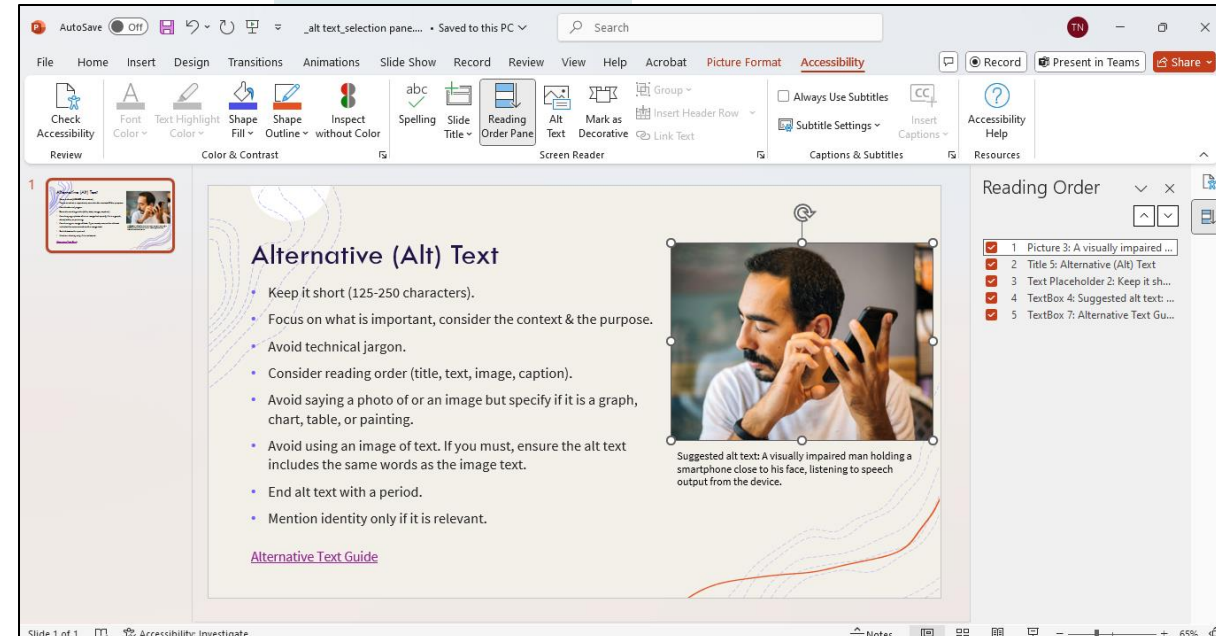
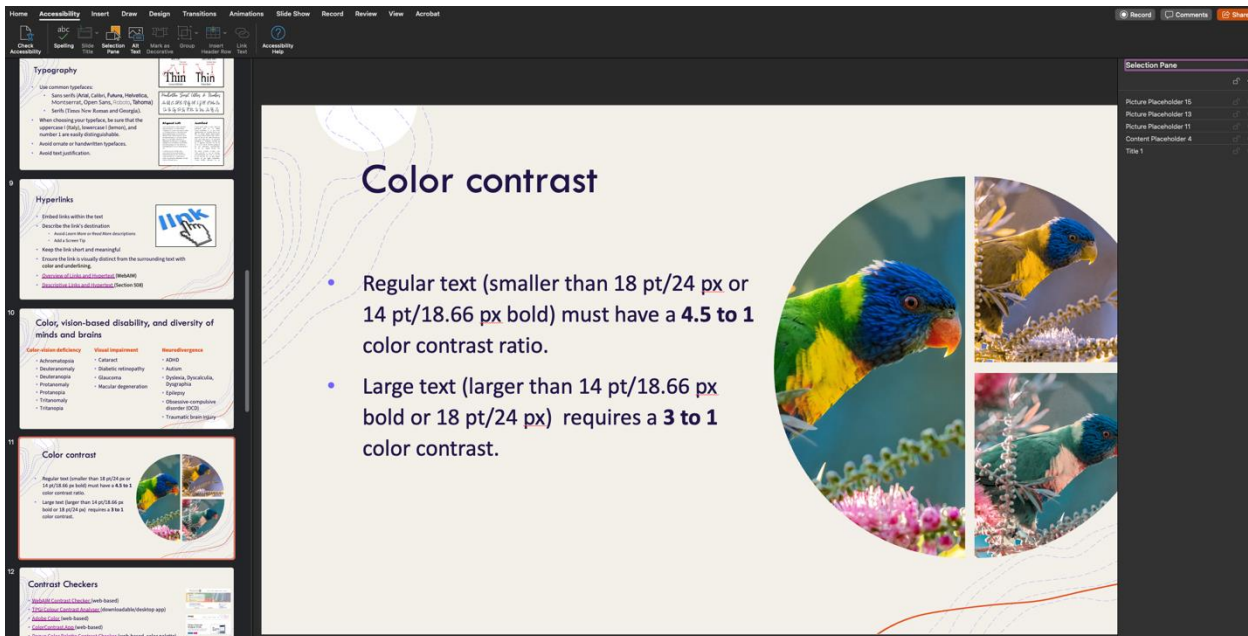


Reading order

✓ Am I verifying the reading order is accurate after adding, copying, and pasting content?

- Selection Pane (Mac)

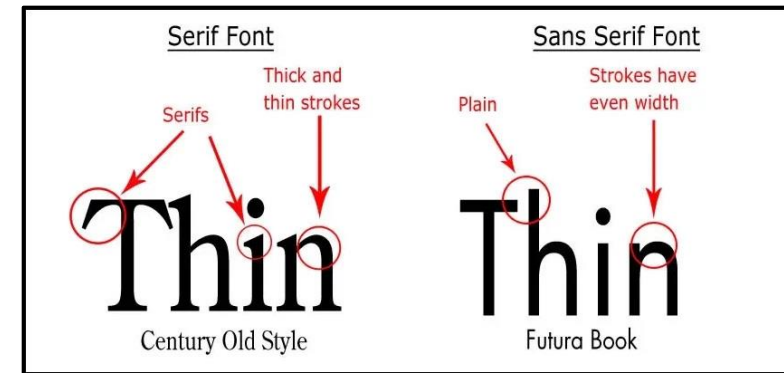
- Read Order Pane (Windows)



Typography

✓ Am I using readable typefaces and avoiding overly decorative fonts?

- Use common typefaces:
 - Sans serifs (Arial, Calibri, Futura, Helvetica, Montserrat, Open Sans, Roboto, Tahoma)
 - Serifs (Times New Roman and Georgia).
- When choosing your typeface, be sure that the uppercase I (Italy), lowercase l (lemon), and number 1 are easily distinguishable.
- Avoid ornate or handwritten typefaces.



Handwritten Script Letters & Numbers
Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn
Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz

Resources

- [Typefaces and Fonts](#)
- [Accessible Fonts](#)

Font & Text Styles

✓ Is my text styled and structured for easy reading?

- Choose a font size that best suits the purpose of the document.
 - For documents that will be displayed, ensure the text is at least 18pt.
- All caps or italics make word shapes harder to recognize, slowing reading and causing difficulties for people with dyslexia, cognitive disabilities, or low vision.
- Avoid text justification. Uneven spacing between words in justified text can create distracting “rivers” of white space running down the page, which makes the content harder to read.

USING ALL CAPS CAN BE HARD TO READ, ESPECIALLY WHEN YOU HAVE A WHOLE SENTENCE FILLED WITH UPPERCASE LETTERS.

Using all caps can be hard to read, especially when you have a whole sentence filled with uppercase letters.

Using italics throughout your document can make it hard to read and may stop your audience from reading any further.

Using *italics* throughout your document can make it hard to read and may stop your audience from reading any further.

Aligned Left

Lorem ipsum dolor sit amet, maiorum constituto mea at, vis eripuit fierent voluptatum et, te quis sumo signiferumque sit. Sit probo lucilius eu. Has ad utinam option signiferumque, ea usu periculis urbanitas, falli volumus oportere est an. Pro inani perfecto cu. Esse meis integre quo ne, ius admodum mandamus in. Admodum suavitate sea ei, sit appareat omittantur ea, usu id dictas everti. Brute nominati gubergren an sed, laboramus concludaturque ius in, an timeam discere sea.

Justified

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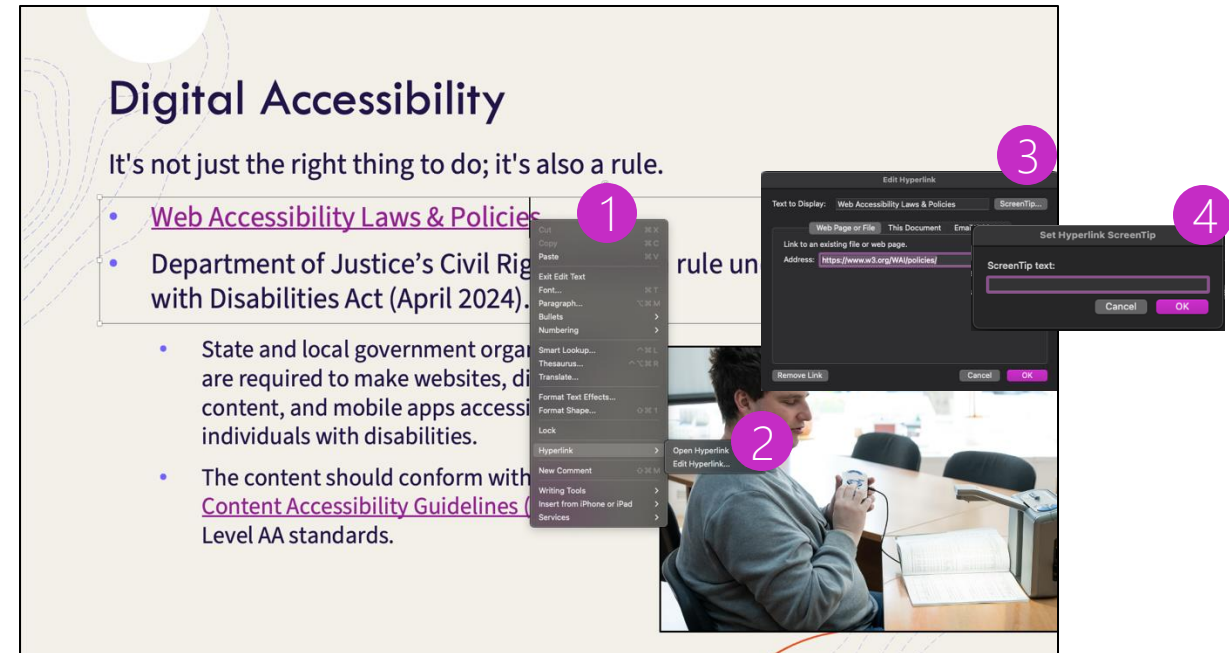
Resources

- [Understanding Accessible Fonts and Typography for Section 508 Compliance](#)
- [Evaluating Cognitive Web Accessibility](#)

Hyperlinks

✓ Have I used clear, descriptive text for embedded hyperlinks and made sure they are visually distinct?

- Embed links within the text.
- Use descriptive text for hyperlinks
 - Avoid *Learn More* or *Read More* descriptions
 - Add a Screen Tip.
- Keep the links short and meaningful.
- Make sure the links are visually distinguishable (color and underlining).



Resources

- [Overview of Links and Hypertext](#)
- [Descriptive Links and Hypertext](#)
- [Master the Art of Accessible Link Text](#)

Color

✓ Do all font colors meet the minimum contrast requirements?

- Choose color combinations that are accessible.
 - Regular text (smaller than 18 pt/24 px or 14 pt/18.66 px bold) requires a 4.5:1 color contrast ratio.
 - Large text (larger than 14 pt/18.66 px bold or 18 pt/24 px) requires a 3:1 color contrast ratio.
- Use high contrast visuals.
- Avoid using color alone to convey important information
- Use contrast checkers and color vision deficiency simulators.



Resources

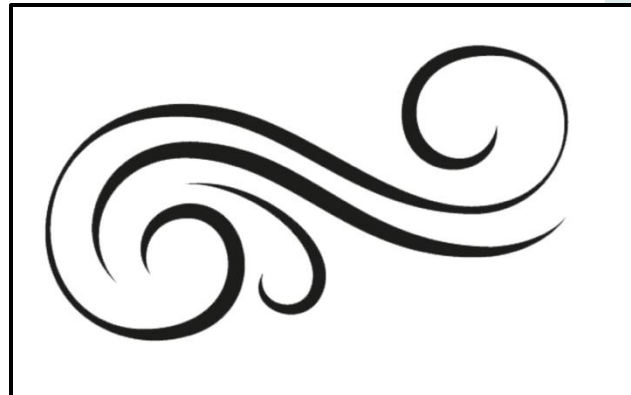
- [WebAIM Contrast Checker](#) (web-based)
- [Deque Color Palette Contrast Checker](#) (web-based, color palette)
- [TPGi Colour Contrast Analyser](#) (downloadable/desktop app)
- [Who Can Use](#) (web-based)
- [Adobe Color](#) (web-based)
- [ColorContrast.App](#) (web-based)

Images

- **Informative images** (pictures, photos, and illustrations that graphically represent concepts and information).



- **Decorative images** (the the purpose of an image is to add visual decoration to the page, rather than to convey information).



- **Functional images** (images are used to initiate actions rather than to convey information, such as buttons, linked logos, and other interactive elements).



Resources

- [Images Tutorial](#)
- [The Alt Decision Tree](#)

Alternative Text

✓ **Have I provided alt text for all informative images?**

- Keep it short (125-250 characters).
- Consider context and purpose. Describe what you see not what you know.
- Use clear language and action words.
- Specify if the image is a graph, chart, table, or painting but avoid generic terms like "photo" or "image."
- Avoid images of text.



Resources

- [Wolverine Describer](#)
- [ASU Image Accessibility Creator](#)
- [WebAIM: Alternative Text Guide](#)

Tables & Charts

- Charts and tables should be inserted using the Insert tool, not as images. Image-based charts and tables provide minimal accessibility for screen readers.
- Incorporate colorblind-friendly design in all visual data representations.
- Ensure the table title is not embedded in the first row.
- Avoid blank cells and merged cells. Do not use blank columns for styling.
- Do not rely on color alone to convey information.

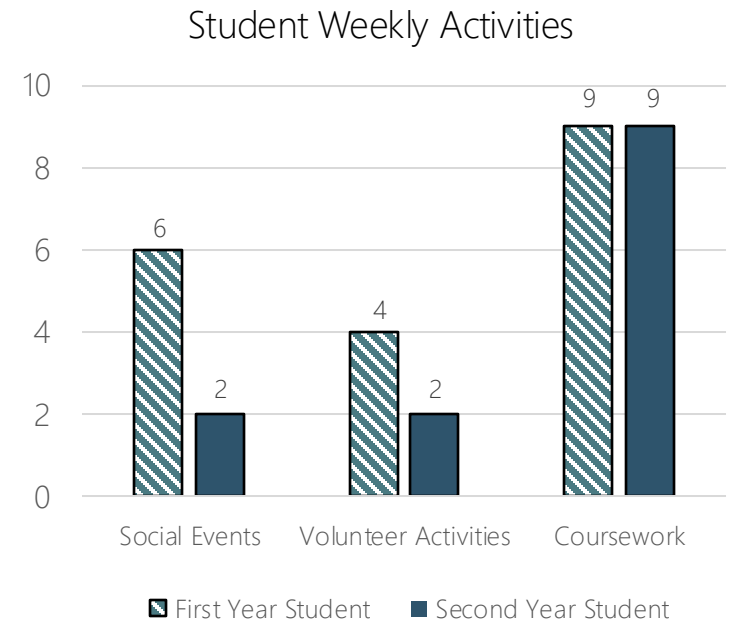


Table example: Concerts & Events, Classes, Student Recitals, General Scheduling

Contact Person	Email	Scheduling for classes by Departments	Student recitals, events, and general booking by building
Erin Burriss	etheisen@umich.edu	All Departments except Dance	Earl V. Moore, Stamps, Stearns, and Burton Tower
Katie Gunning	kgunning@umich.edu	Dance	Dance
Kathryn Pamula	kpamula@umich.edu	N/A	Walgreen Drama Center (WDC)

Resources

- [Creating Accessible Tables](#)
- [Charts & Accessibility](#)

Audio & video content

✓ Does my audio and video content include subtitles or captions?

- Video/audio content should not play automatically.
- Controls should always remain visible, allowing users to start and stop the video/audio as needed.

Resources

- [Subtitling Add-In for Microsoft PowerPoint](#)
- [Description of Visual Information](#)



Animations, sounds, and transitions

✓ Are there any motion effects, sounds, or transitions in my presentation?

- Unnecessary animations, sounds, or transitions can be distracting and may hinder accessibility.
- Screen readers often struggle to interpret and convey animated content accurately.
- Sound effects can interfere with screen reader audio, making it difficult for users to follow along.



If animation is essential:

- Consider providing an alternative accessible presentation using sequential slides instead of animated objects.
- Use a static slide with on-screen text that clearly explains the meaningful context of the animation.

Resources

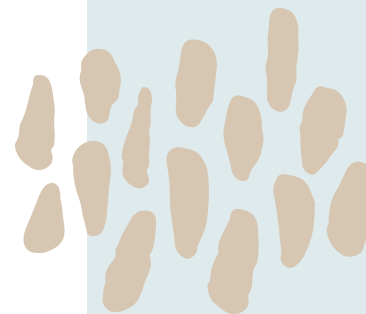
- [Designing for Neurodiverse Learners](#)
- [Animation, Motion, and Timed Content](#)

Final Considerations

- ✓ **Did I include the Title and Author details in the document properties?**
- ✓ **Are page numbering truly needed?**
 - Visual Page numbers are not required when your final output is a PDF.
- ✓ **Do I have any important information in Header and Footer?**
 - Footer boxes are ignored by screen readers. If the information in the footer contains important information, copy footer information into text boxes or manually tag them in the PDF.
- ✓ **Have I used the Accessibility Checker to identify and fix all accessibility concerns?**

Resources

- [Making PowerPoint presentations accessible](#)
- [Web AIM: PowerPoint Accessibility](#)



Resources at U-M

- [Digital Accessibility at the University of Michigan](#)
- [Digital Accessibility Help Request Form from ITS](#)
- [Assistive Technology Request Form](#)
- Email 4help@umich.edu or contact SMTD IT at smtd.it@umich.edu



THANK
YOU

