



# Creating accessible documents and fixing ones that aren't

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# Agenda



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- Document accessibility: What it is and why it matters
- Screen readers: A brief introduction
- Choosing the right format
- Starting with a good base
  - Word
  - PowerPoint



# **Course resources**

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<https://technicalassistance.hdiuky.net/accessible-document-links/>



# Document accessibility

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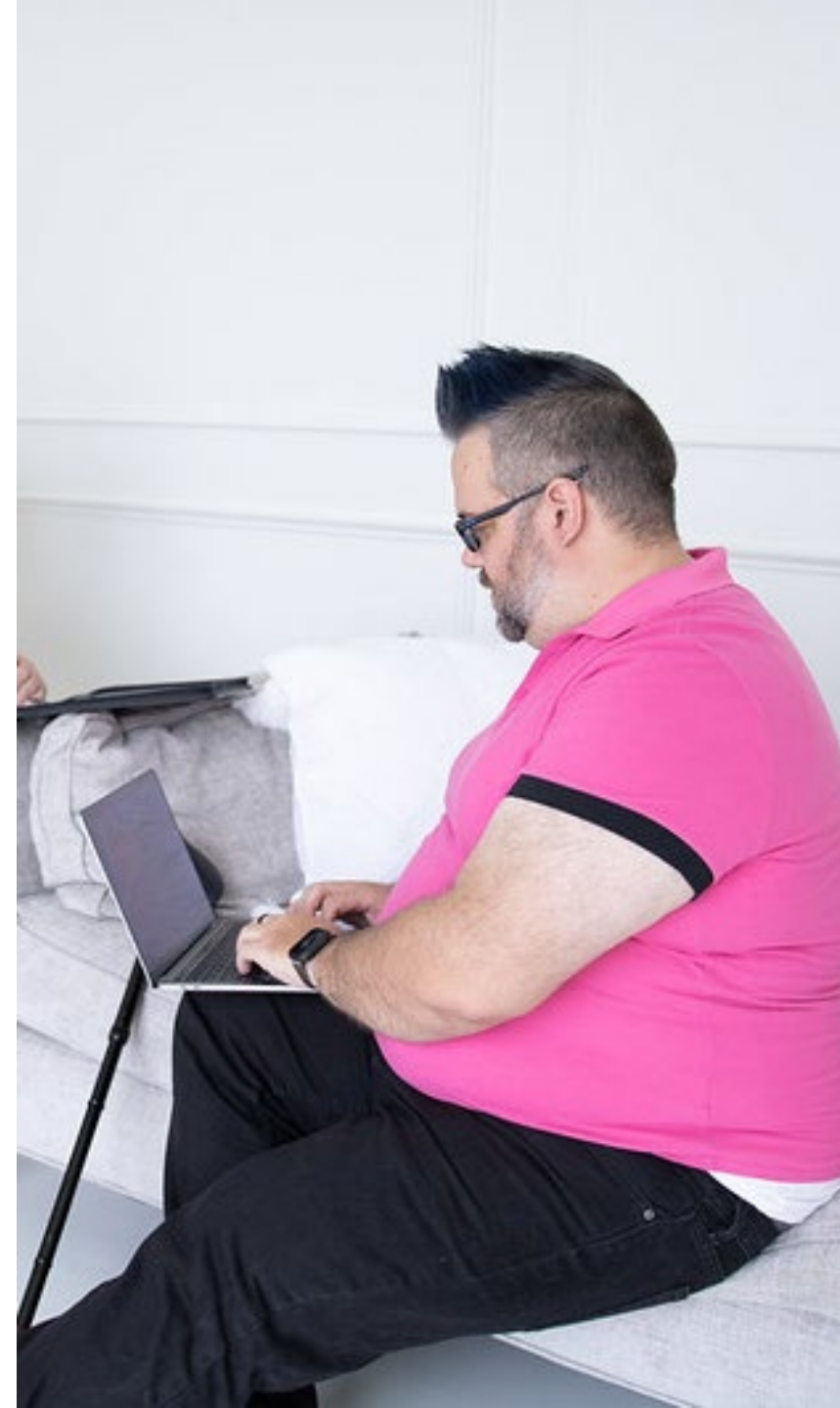
What it is and why it matters

# What is accessible design?

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**Deliberately** considering the needs of individuals with disabilities **throughout the design process.**

Results in experiences that make *everyone* feel welcome, regardless of their abilities or access methods.





# Who benefits from accessible communication?

People. All of 'em. But especially people:

- without vision
- without speech
- with limited vision
- with limited manipulation
- without perception of color
- with limited reach and strength
- without hearing
- with limited language, cognitive, and learning abilities
- with limited hearing

# Common assistive technology

- Screen reader
- Screen magnifier
- Text reader
- Speech input
- Alternative keyboard
- Refreshable braille display



# Principles of accessibility

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**Perceivable** - Content is designed so that it can be perceived through various senses.

**Operable** - Interactive elements work regardless of how users interact with them.

**Understandable** - Content is clear, predictable, and consistent.

**Robust** - Content follows best practices to ensure compatibility with different devices, browsers, and assistive technologies (AT).





# Screen readers

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A brief introduction



# **What is a screen reader?**

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**Software that helps someone without vision or with limited vision interact with computers and other digital technologies.**

# Who uses screen readers?

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- People without vision
- People with limited vision
- People with limited language, cognitive, or learning abilities

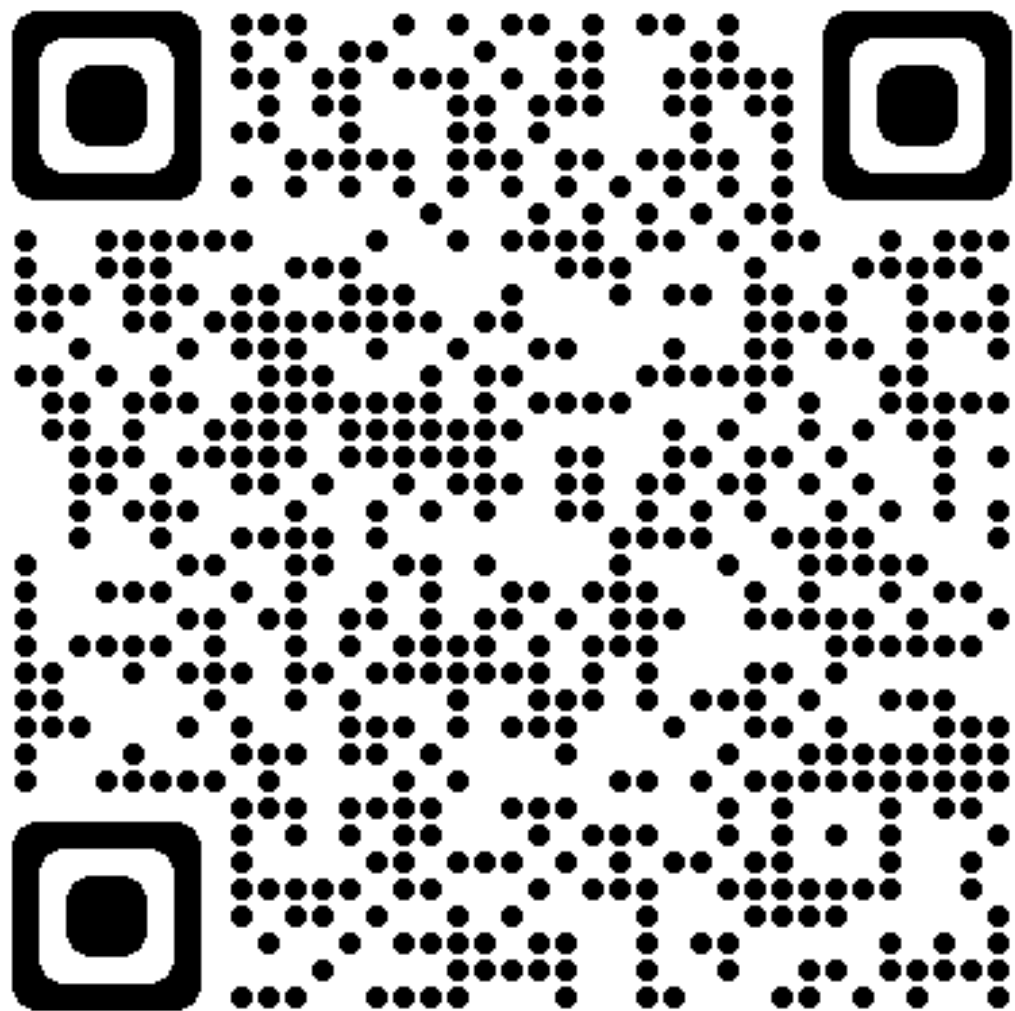
In the United States alone, more than **7 million people** have some form of visual disability.



# Common screen readers

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- NVDA (NonVisual Desktop Access)
- JAWS (Job Access With Speech)
- VoiceOver
- Windows Narrator
- TalkBack
- Orca



# **NVDA for Windows Keyboard Commands Quick reference guide**

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On the web

<https://dequeuniversity.com/screenreaders/nvda-keyboard-shortcuts>

Printable PDF

<https://media.dequeuniversity.com/en/courses/generic/testing-screen-readers/2.0/docs/nvda-guide.pdf>



# Choosing your format

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**What is the best format for  
communicating my message?**

# Office XML (.docx, .pptx)

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## Advantages

- Easy to create and edit
- Simple formatting
- Lots of free templates
- Built-in accessibility tools
- Integrate with other Office products

## Disadvantages

- Require paid programs to create and edit
- Formatting limitations
- Extremely limited form capability
- No support for complex tables
- Only Edge allows viewing without a plugin

# PDF-UA (Universal Access)

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## Advantages

- Native viewing in all major browsers
- Accessibility tag tree for maximum UX control
- Preserves advanced layouts and 'floating' content

## Disadvantages

- Creating requires expensive software (Adobe Acrobat)
- Much more difficult to change and edit document content
- Requires a bit more tech-savvy to fix things

# HTML and web content

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Do a great job with simple information and when the presentation is not important.

## June Production Team Meeting Lunch Menu

### Burrito Bowls

- Cilantro Lime White Rice
- Choice of:
  - Shredded Chicken
  - Braised Beef
  - Vegan Chorizo
- Pico De Gallo
- Salsa Verde
- Romaine Lettuce
- Avocado Ranch Dressing
- Charro Beans
- Guacamole
- Dulce de Leche Brownies

### Drinks

- Iced Tea
- Iced Water



# Starting with a good base

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**Building for accessible  
communication**

# Alternative Text (Alt Text)

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- Read by a screen reader
- Indexed by search engines
- Displayed if an image fails to load
- Context is key





# Color Contrast

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- Range of brightness of colors and shadows
- Pertains to images, text, and icons
- Color contrast is represented as a ratio – the higher the ratio, the better the contrast



# Minimum contrast ratio

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WCAG 2.0 Level AA - Ratio of at least 4.5:1

- Gray (#767676) on white
- Brown (#9E6D00) on white
- Blue (#1D1038) on gray (#808080)
- Red (#E60000) on yellow (#FFFF47)

# Accessible typography

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## Font size

- Highly dependent on media type
- Footnote text: 9pt
- Body text: 12pt - 14pt
- Headings: 18pt – 24pt

## Formatting

- Text left-aligned or justified
- Limit the *use of italics*

## Weight and contrast

- Light
- Regular
- **Semibold**
- **Bold**

- Light
- Regular
- **Semibold**
- **Bold**

# Choosing a font

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Sans-serif fonts like Roboto or Arial are easier to read as body text, especially with longer **digital** documents.

Serif fonts like Times New Roman or Playfair Display stand out as headings and are good for long **printed** documents.

# Choosing a font

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Overly decorative fonts can be used sparingly for logos or special text but shouldn't contain essential information.

- *Yellowtail*
- **Abril Fatface**
- **Rubik Glitch Pop**

Font choices are subjective. Choose what you think looks best but ask for feedback from clients or colleagues.

# Text formatting checklist

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- Lists are tagged (or not) appropriately
- Columns are actually columns
- The document's proofing language is set and matches all of the content
- Link names are unique and descriptive

## Resource links

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- 1) [Click here](#) for The Muppets
- 2) [Click here](#) for The Muppets Take Manhattan
- 3) [Click here](#) for Muppet Babies
- 4) [Click here](#) for The Muppet Show
- 5) [Click here](#) for A Muppet Christmas Carol
- 3) [Click here](#) for the Jim Henson Workshop



# Headings

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- Provide structure, not style
- Nested hierarchically
- Label sections of the page
- Describe the content or purpose of a section

<h1> Resource links: Creating acce

<h2> Accessing content

<h2> Laws and regulations

<h3> Web Content Accessibility Guide

<h2> Testing tools

<h2> Document accessibility fundame

<h2> Section508.gov

<h2> Font selection

<h2> Type size and formatting

<h3> What is a “12pt font” anyway?



# Office 365 accessibility

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Starting with a good base

# Document identification

- **File name** is descriptive and identifies the document or its purpose
- **Presentation or document title** is set  
**File > Info > Properties > Title**
- Files are saved in the most current format (**.docx** or **.pptx**)

## Properties ▾

Size 8.17MB

Slides 20

Hidden slides 0

Title **Buncha slides**

Tags [Add a tag](#)

Categories [Add a category](#)

## Related Dates

Last Modified 1/10/2024 5:15 PM

# Headings & slide titles

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- Headers and Footers are not read
- Allow you to navigate quickly

Search document

**Headings**

Pages

Results

▾ Ryan's Steakhouse (not that one)

Appetizers

Salads

Soup

SPAM®

Shrimp

Chicken

# Applying alt text

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Right click an image and select **View Alt Text**

Check the **Mark as decorative** checkbox for decorative images

How would you describe this object and its context to someone who is blind or low vision?

- The subject(s) in detail
- The setting
- The actions or interactions
- Other relevant information

*(1-2 detailed sentences recommended)*

Exclamation mark with solid fill

Mark as decorative ⓘ

# Check Accessibility

- Click **Accessibility: Investigate** in the Status bar
- Click **Review > Check Accessibility**



A screenshot of the Microsoft Word Accessibility pane. The pane is titled "Accessibility" and has a close button (X) in the top right corner. Below the title is the section "Inspection Results". Underneath, there is a section for "Errors" which is expanded to show two categories: "Missing object description (2)" and "Image or object not inline". The "Image or object not inline" category is further expanded to show "Rectangle 3" and "Group 2", each with a dropdown arrow. Below the errors section, there is a checkbox labeled "Keep accessibility checker running while I work" which is checked. At the bottom of the pane, there is a section for "Additional Information" with a dropdown arrow, containing a link that says "Read more about making documents accessible". The top of the screenshot shows the Word ribbon with "Voice", "Sensitivity", "Editor", and "Add-ins" tabs visible. The bottom of the screenshot shows the Windows taskbar with the "Accessibility: Investigate" icon active.

# Working smarter

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- Make edits to the source document instead of Acrobat
- Save well-formatted files as templates so you don't have to work so hard the next time





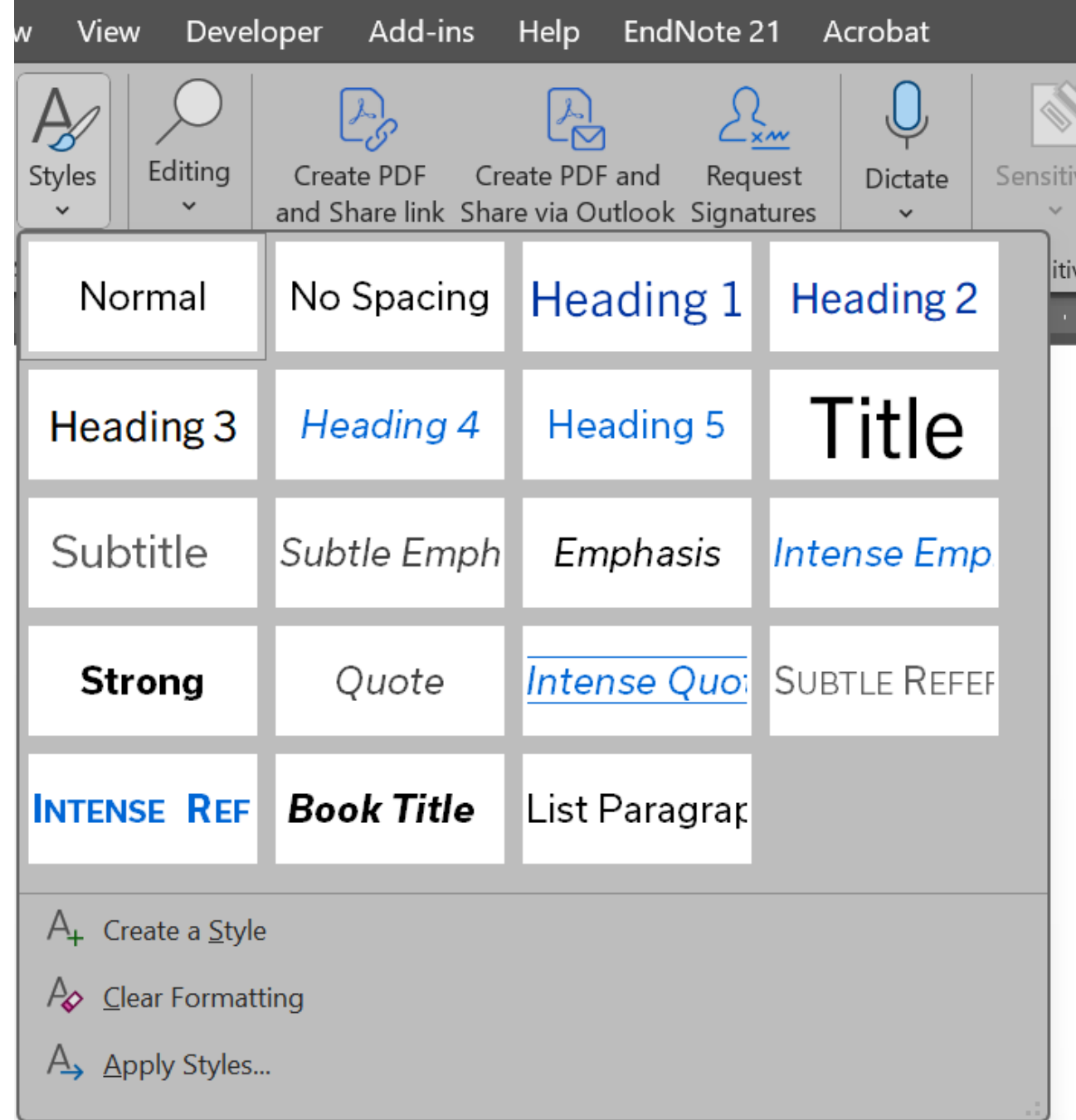
# Word documents

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Starting with a good base

# Paragraph & heading styles

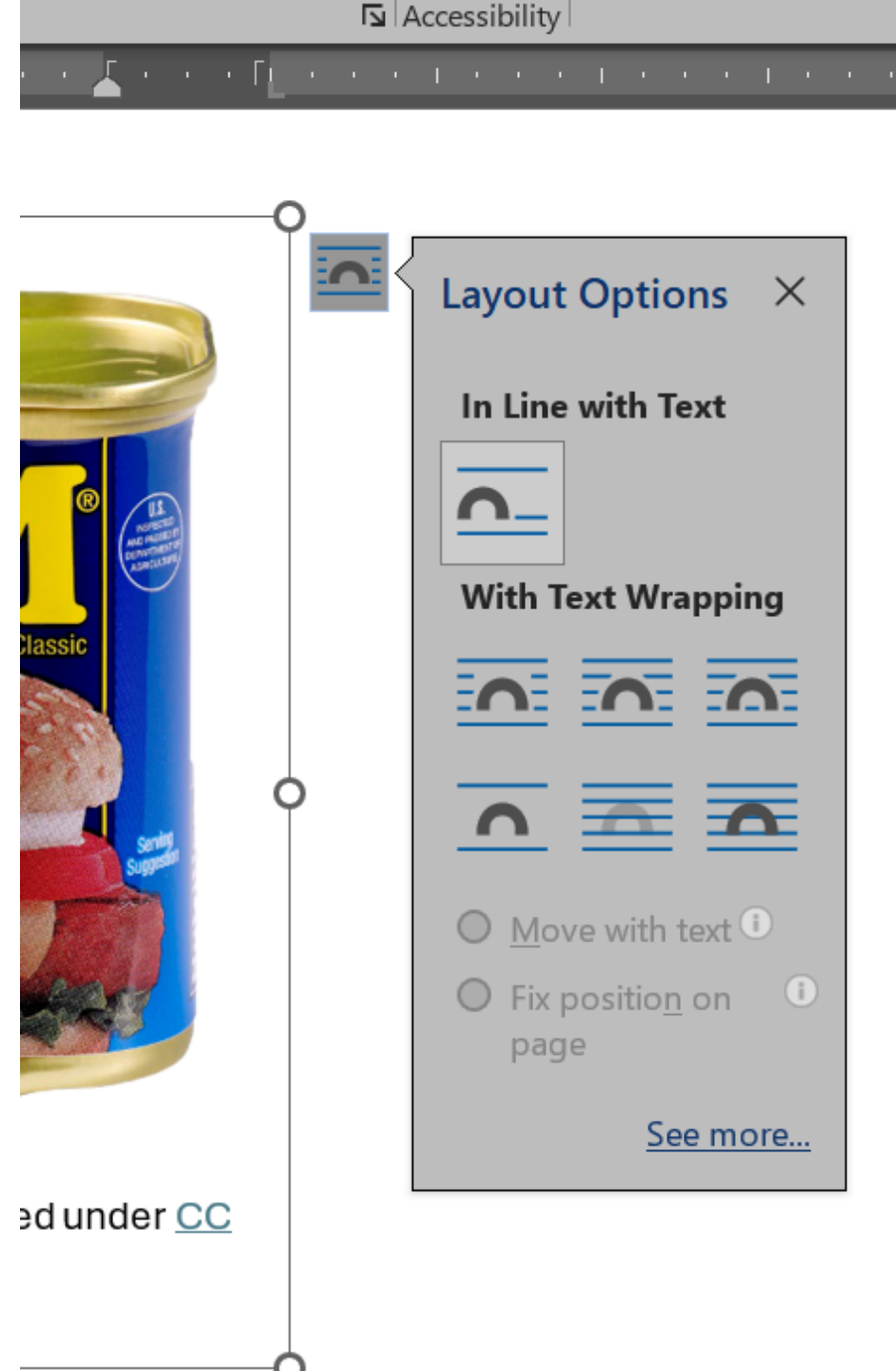
- Use the Styles pane to designate headings and apply reusable formatting
- Built-in headings styles automatically add the document structure





# Layout Options

- Images, shapes and text boxes should be in-line
- Elements with text wrapping are accessible when exporting to PDF (but only kinda in HTML)





# PowerPoint presentations



Starting with a good base

# Media formatting

- Alternative formats for audio, video, and multimedia files are accurate and complete
- The presentation does not contain flashing objects

and loving surroundings.

00:00:09.866 --> 00:00:12.200

Keep in mind that the use of visual skills

00:00:12.200 --> 00:00:14.933

is continuous throughout the day.

00:00:14.933 --> 00:00:17.266

Not only does the physical environment

00:00:17.266 --> 00:00:18.933

need to be considered,

00:00:18.933 --> 00:00:22.133

but the learning atmosphere as well.

00:00:22.233 --> 00:00:25.233

Simple adaptations can be made to prepare

# Reading order pane

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- Sets the order. For reading.
- Should match the visual order to the greatest extent possible.
- Clearing checkboxes marks items as decorative and hides them from assistive technologies.
- Reordering items in the Selection Pane also changes the reading order.

Reading Order



- 1 Title 1: Accessible typography
- 2 Content Placeholder 2: Font ...
- 3 Content Placeholder 3: Weig...
- Content Placeholder 3: Deco...
- 4 Title 1: Accessible typograph...