

# Note

These slides are for participants of a live WebAIM training and are not for distribution to others. They contain examples of (intentionally) inaccessible content that may not make sense out of context.

Visit [webaim.org](https://webaim.org) for articles on many of the topics covered within these slides.

# Creating Accessible Electronic Documents



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[WebAIM.org](http://WebAIM.org)

Slides & resources online at:

[webaim.org/presentations/2025/ndit](https://webaim.org/presentations/2025/ndit)

# Training outline

- Introduction
- Guidelines and Laws
- Evaluating Document Accessibility
- Creating Accessible Documents
  - Headings in Word
  - Images and alternative text
  - Tables, links, lists, columns, language
- Slide layouts and order in PowerPoint
- Other Accessibility Principles
  - Contrast
  - Color use
  - Cognitive disabilities
- PDF Structure
- Converting to PDF
- Evaluating and Repairing a PDF in Acrobat Pro

Is your electronic content accessible?

# Notable US laws

Law	Scope	Standard
<b>Section 508</b>	US Federal Government	WCAG 2.0
<b>Section 504</b>	Federal funding recipients	?
<b>Section 504 Part 84*</b>	HHS funding recipients	WCAG 2.1
<b>ADA Title I</b>	Employment	?
<b>ADA Title II*</b>	State and Local Government	WCAG 2.1
<b>ADA Title III</b>	Private and commercial	?

\*Updated in 2024. Changes take effect in 2026-2027

# WCAG 2

- Web Content Accessibility Guidelines
- Versions 1.0 (1999), 2.0 (2008), 2.1 (2018), 2.2 (2023)
- Principles (**P**erceivable, **O**perable, **U**nderstandable, **R**obust)
  - ↳ Guidelines
    - ↳ Success Criteria (Level A, AA, AAA)

# 2.0, 2.1, 2.2



Log in

**Focus Visible**  
**2.0**



Log in

**Non-text Contrast**  
**2.1**



Log in

**Focus Appearance**  
**2.2**



A, AA, AAA



**Captions  
(Prerecorded)  
Level A**



**Captions  
(Live)  
Level AA**



**Sign Language  
(Prerecorded)  
Level AAA**

# WebAIM WCAG 2 Checklist

## Operable

Interface forms, controls, and navigation are operable.

### Guideline 2.1

Make all functionality available from a keyboard.

#### 2.1.1 Keyboard

A

2.0

- ☐ All page functionality is available using the [keyboard](#), unless the functionality cannot be accomplished in any known way using a keyboard (e.g., free hand drawing).
- ☐ Page-specified shortcut keys and accesskeys (accesskey should typically be avoided) do not conflict with existing browser and screen reader shortcuts.

#### 2.1.2 No Keyboard Trap

A

2.0

- ☐ [Keyboard](#) focus is never locked or trapped at one particular page element. The user can navigate to and from all navigable page elements using only a keyboard.

#### 2.1.3 Keyboard (No Exception)

AAA

2.0

- ☐ All page functionality is available using the keyboard.

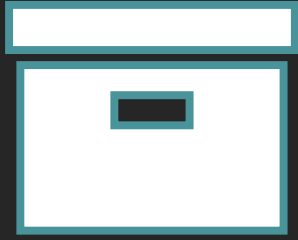
#### 2.1.4 Character Key Shortcuts

A

2.1

- ☐ If a keyboard shortcut uses printable character keys, then the user must be able to disable the key command, change the defined key to a non-printable

# ADA Title II Exceptions



## No longer in use

1. Archived web content
2. Old electronic documents
3. Old social media posts

(Old = before effective date  
and not in use)



## Posted by others

Posted by a third party  
“not controlled by or  
acting for state or local  
governments”



## Individual's documents

Individualized, secure,  
electronic documents

# “Preexisting conventional electronic documents”

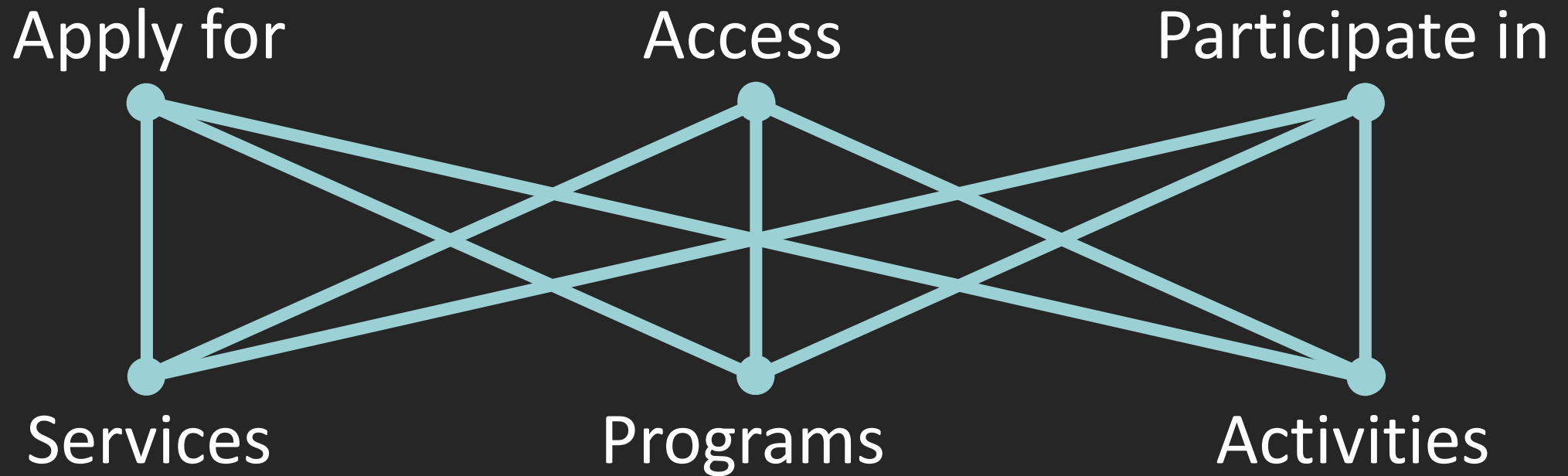
Meets **BOTH** requirements:

## 1. Conventional document

- Word processing
- Presentation
- PDF
- Spreadsheet

## 2. Available before the effective date

...and **NOT** still being used



“State and local governments must provide individuals with disabilities with effective communication, reasonable modifications, and an equal opportunity to participate in or benefit from their services, programs, and activities.”

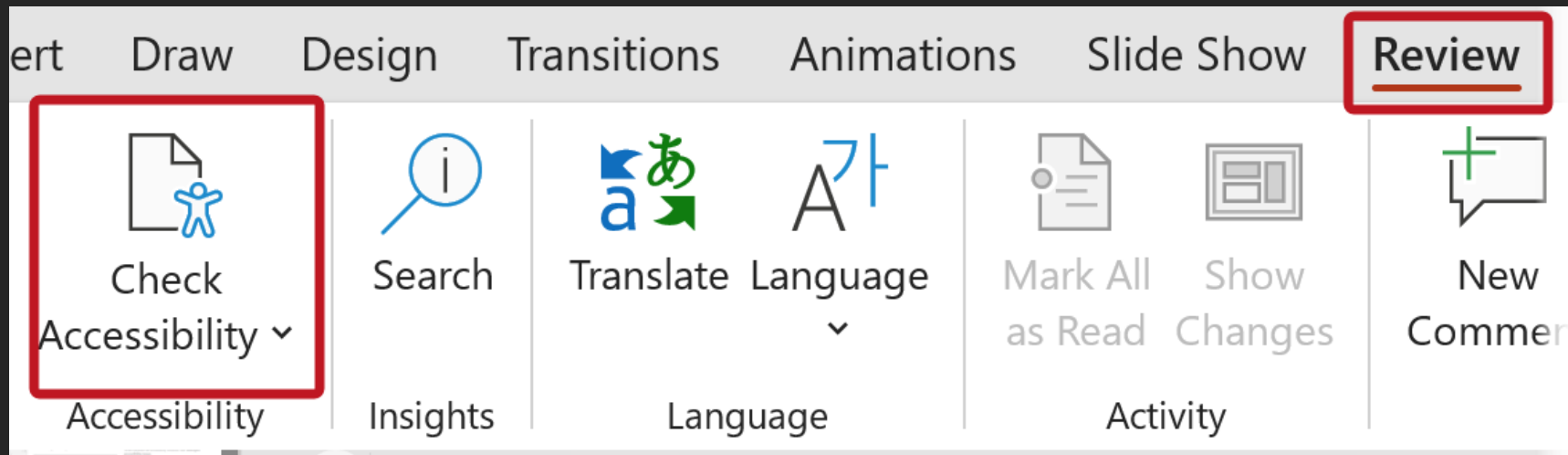
[ADA.gov factsheet](https://www.ada.gov/factsheet)

Accessibility > Compliance

Check Accessibility



# Review tab > Check Accessibility



# Word and PowerPoint 365 Accessibility Evaluation Guide



This guide combines automated checks from the Accessibility Checker in Microsoft Office 365 with a series of manual checks to help you evaluate and repair common accessibility issues.

First, run the built-in [Accessibility Checker](#). The Accessibility panel will display: **ERRORS**, **WARNINGS**, **TIPS**, and **INTELLIGENT SERVICES**. Click on individual results to go to that issue in the document and make the necessary repairs. Then use the **MANUAL** review steps to identify any additional issues.

## Headings (Word-only)

Principle	Review	Repair
Document contains <a href="#">Word Heading Styles</a> (Heading 1, Heading 2, etc.)	<b>TIP: No Headings in Document</b> (Document must be 3+ pages)	Add new headings or apply the correct style to visual headings with <b>Home</b> tab > <i>Styles</i> gallery.
Visual headings USE Word <i>Styles</i> (Heading 1, Heading 2, etc.)	<b>MANUAL: View</b> tab > <b>Navigation Pane</b> > <b>Headings</b> tab ( <b>Document Map</b> tab in Mac). Ensure the structure in the panel matches the visual heading structure.	<b>Home</b> tab > <i>Styles</i> gallery. Apply the correct heading style to visual headings.
Headings do not skip levels (e.g., Heading 1 to Heading 3).	<b>MANUAL: Navigation Pane</b> . Check for skipped levels.	<b>Home</b> tab > <i>Styles</i> gallery. Change the heading style to the correct level.
Headings are not empty	<b>MANUAL: Navigation Pane</b> . Check for empty lines.	Delete empty headings.

## Section Names (PowerPoint-only)

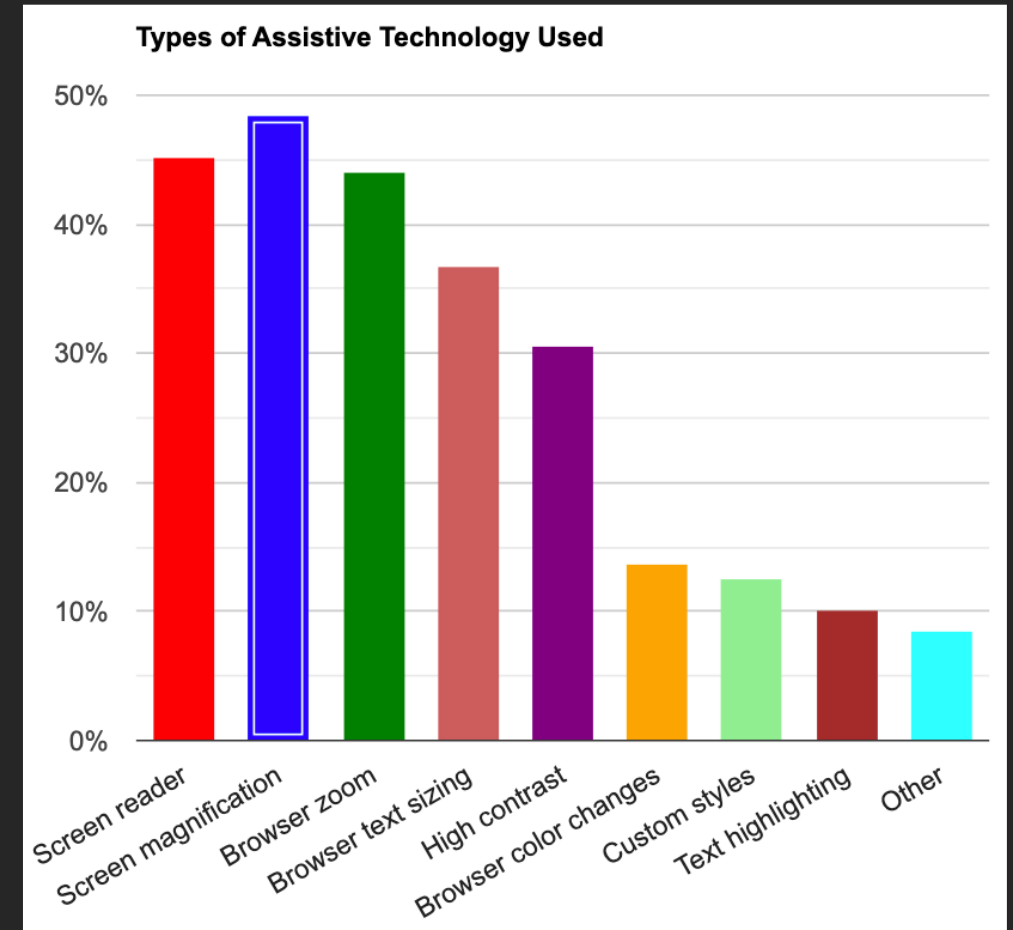
Principle	Review	Repair
Section names are not generic.	<b>ERROR: Default Section Name</b>	<b>Right click</b> section name > <b>Rename</b>

# Word and PowerPoint Accessibility Evaluation Guide

# Screen Reader Users

# Not all screen reader users are blind

- Most have low vision.
  - 45% of respondents to our low-vision survey use a screen reader.
- Some users have a reading or cognitive disability.
- Focus on structure and semantics.



## Test with WAVE

- Run a report at [wave.webaim.org](http://wave.webaim.org). For very complex or non-public pages, use the WAVE Chrome or Firefox extension ([wave.webaim.org/extension](http://wave.webaim.org/extension)).
  - Watch the overview video on the WAVE homepage.
- Error icons flag known issues. Other icons identify potential problems or features. Click an icon to highlight the corresponding element and learn more using the **Reference** panel.
- Use the **Details** panel to review page issues. Click an icon to find it in the page. Uncheck icons to hide them.
- Turn off **Styles** to simplify the page view and to check the reading and navigation order.
- Click the **Code** button at the bottom of the page to see the page code with WAVE icons.

### Images

- Ensure alternative text (shown in green) conveys the equivalent **content** and/or **function** of the image.
- Look for ways to replace images of text with true text.
- Content conveyed via CSS images must have a text alternative.

### Headings and Regions/Landmarks

- Use the **Structure** panel in the sidebar to review.
- The main heading should usually be an <h1>.
- Ensure the headings and regions/landmarks reflect the page structure.
- Look for skipped heading levels (e.g., <h2> to <h4>).

### Contrast

- Select the **Contrast** panel.
  - WAVE flags WCAG AA contrast issues in text.
  - Non-underlined links need 3:1 contrast with body text, plus a change, like underlining, on hover and focus.
- Check colors in WebAIM's contrast checker: [webaim.org/resources/contrastchecker/](http://webaim.org/resources/contrastchecker/).
- Manually check contrast in icons and images.

### ARIA

- WAVE flags ARIA with purple icons.
- Check for appropriate use of ARIA roles, states, and properties (presented in green).
- Ensure ARIA labels and descriptions are correct.

### Forms

- Ensure form controls have descriptive labels.

### Links and buttons

- Ensure links and buttons present descriptive text.

### Other common WAVE checks

- Page language is specified (e.g., <html lang="en">).
- If there are data tables, ensure table headers are present and have the correct scope.
- Look for links with ambiguous link text like "click here."
- Ensure the page title is descriptive and succinct.

## Use a checklist

- WCAG 2: [webaim.org/standards/wcag/checklist/](http://webaim.org/standards/wcag/checklist/).

## Check keyboard accessibility

- The first time testing with Mac, press **Control + F7** to enable full keyboard accessibility.
  - In Safari, select **Preferences > Advanced > Accessibility > Press Tab to highlight each item...**
- Navigate the page using only the keyboard:
  - **Tab**: Navigate interactive elements (links, form controls, etc.)
  - **Shift + Tab**: Navigate backwards.
  - **Enter**: Activate links or buttons, submit most forms.
  - **Spacebar**: Activate checkboxes and buttons, expand a select menu, or scroll the window.
  - **Arrow keys**: Navigate radio buttons, select/dropdown menus, sliders, tab panels, tree menus, etc.
- Look for mouse-only interaction (e.g., rollover menus).
- Confirm every focusable element has a keyboard focus indicator/outline with at least 3:1 contrast.
- Ensure any "skip" links work correctly and are visible to sighted keyboard users.
- Make sure the navigation order is logical and intuitive.
- Test dialog and pop-ups. Can you navigate and close the dialog? Does focus return to a logical place?
  - Modal dialogs must maintain focus until dismissed.
  - Non-modal dialogs must close when focus is lost.
  - **Esc** should also close all dialogs and menus.

## Test content scaling

- In **Chrome**, press **Ctrl/cmd** and:
  - **+** to zoom in (larger)
  - **-** to zoom out (smaller)
  - **0** to reset to 100%
- For WCAG 2.0 – Zoom to 200%
- For WCAG 2.1 – Adjust viewport to 1280 pixels wide and zoom to 400%. Avoid horizontal scrolling unless required for the content (e.g., a data table or map).
- Text-only zoom (Recommended) – In **Firefox**, choose **View > Zoom > Zoom Text Only**. Zoom to 130-150%

## Test with a screen reader

- WebAIM tutorials:
  - [webaim.org/articles/jaws/](http://webaim.org/articles/jaws/)
  - [webaim.org/articles/nvda/](http://webaim.org/articles/nvda/)
  - [webaim.org/articles/voiceover/](http://webaim.org/articles/voiceover/)
- Focus on navigation, forms, and dynamic content.
- Is information presented through ARIA accurate?
- Are forms instructions and error feedback read when navigating a form?
- Are all dynamic changes and updates accessible?

## Scan for other issues

- Captions and transcripts for media.
- Information does not depend on color, audio, shape, size, or location.
- Animating or updating content or media can be paused or stopped.
- No strobing content/video that could cause seizures.

# Structure & Semantics

## Quick Reference: Testing Web Content for Accessibility

### Test with WAVE

- Run a report at [wave.webaim.org](http://wave.webaim.org). For very complex or non-public pages, use the WAVE Chrome or Firefox extension ([wave.webaim.org/extension](http://wave.webaim.org/extension)).
  - Watch the overview video on the WAVE homepage.
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- Ensure alternative text (shown in green) conveys the equivalent content and/or function of the image.
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### Headings and Regions/Landmarks

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- Ensure the headings and regions/landmarks reflect the page structure.
- Look for skipped heading levels (e.g., `<h2>` to `<h4>`).

### Contrast

- Select the Contrast panel.
  - WAVE flags WCAG AA contrast issues in text.
  - Non-underlined links need 3:1 contrast with body text, plus a change, like underlining, on hover and focus.

# Structure & Semantics

# Creating Accessible Documents and Presentations

# Headings



# Use headings correctly

- Describe sections of content
- Useful reading and navigating with a screen reader
- One Heading 1 per page is usually best (but not required)

## h1 EASY SHORTBREAD

### h2 Ingredients

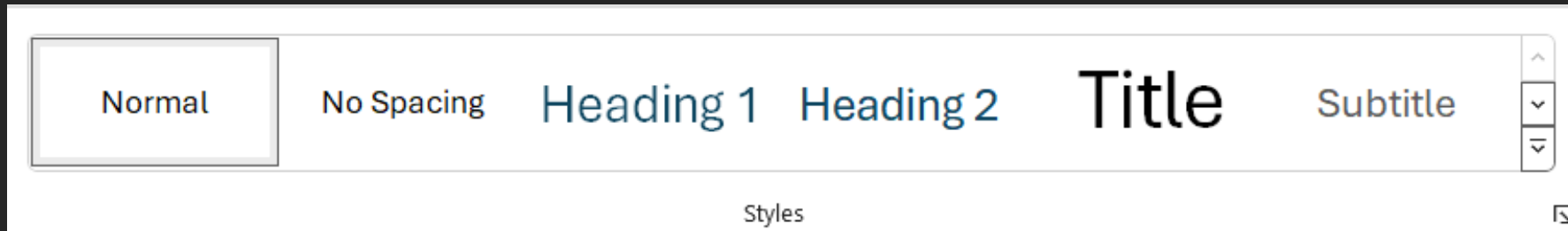
- 1 cup butter, softened
- 1/2 cup sugar
- 2 1/2 cups flour

### h2 Directions

1. Preheat the oven to 300 F.
2. Cream butter and sugar.
3. Gradually stir flour into the creamed mixture until blended.
4. Pat the dough in the bottom of an ungreased 9x13 baking pan.
5. Bake at 300 F for 30 to 40 minutes, until just lightly browned.
6. Remove from oven and pierce all over with a fork.



# Headings in Word



- Use “Styles” gallery
- Ctrl + Alt + 1, 2, or 3
  - command + option on Mac
- **Title** style does not map to a heading

# Demo and Practice – Headings in Word

# Failure – Headings are purely visual

Text is presented visually as a heading, but is not a true heading in document structure



## EASY SHORTBREAD



### Ingredients

- 1 cup butter, softened
- 1/2 cup sugar
- 2 1/2 cups flour



### Directions

1. Preheat the oven to 300 F.
2. Cream butter and sugar.
3. Gradually stir flour into the creamed mixture until blended.
4. Pat the dough in the bottom of an ungreased 9x13 baking pan.
5. Bake at 300 F for 30 to 40 minutes, until just lightly browned.
6. Remove from oven and pierce all over with a fork.



# Failure – Incorrect heading hierarchy

Text presented at a **lower** heading level visually has a **higher** heading level in the document structure.

## h2 EASY SHORTBREAD

### h1 Ingredients

- 1 cup butter, softened
- 1/2 cup sugar
- 2 1/2 cups flour

### h1 Directions

1. Preheat the oven to 300 F.
2. Cream butter and sugar.
3. Gradually stir flour into the creamed mixture until blended.
4. Pat the dough in the bottom of an ungreased 9x13 baking pan.
5. Bake at 300 F for 30 to 40 minutes, until just lightly browned.
6. Remove from oven and pierce all over with a fork.



# Not recommended – Headings skip levels

- Skipping heading levels is not a WCAG failure if the hierarchy is logical
- But it can still be confusing and should be avoided

## h1 EASY SHORTBREAD

### h3 Ingredients

- 1 cup butter, softened
- 1/2 cup sugar
- 2 1/2 cups flour

### h3 Directions

1. Preheat the oven to 300 F.
2. Cream butter and sugar.
3. Gradually stir flour into the creamed mixture until blended.
4. Pat the dough in the bottom of an ungreased 9x13 baking pan.
5. Bake at 300 F for 30 to 40 minutes, until just lightly browned.
6. Remove from oven and pierce all over with a fork.



# Failure – Text should not be a heading

Text that does not describe content should not be a heading.

## h1 EASY SHORTBREAD

### h2 Ingredients

- 1 cup butter, softened
- 1/2 cup sugar
- 2 1/2 cups flour

### h2 Directions

1. Preheat the oven to 300 F.
2. Cream butter and sugar.
3. Gradually stir flour into the creamed mixture until blended.
4. Pat the dough in the bottom of an ungreased 9x13 baking pan.
5. Bake at 300 F for 30 to 40 minutes, until just lightly browned.
6. Remove from oven and pierce all over with a fork.



h3 + Add to my recipe box



# Failure – Empty heading

Empty headings are still announced to screen reader users, which can be confusing.

## h1 EASY SHORTBREAD

### h2 Ingredients

- 1 cup butter, softened
- 1/2 cup sugar
- 2 1/2 cups flour

### h2 Directions

1. Preheat the oven to 300 F.
2. Cream butter and sugar.
3. Gradually stir flour into the creamed mixture until blended.
4. Pat the dough in the bottom of an ungreased 9x13 baking pan.
5. Bake at 300 F for 30 to 40 minutes, until just lightly browned.
6. Remove from oven and pierce all over with a fork.



## h2

## h-

h?

+

Add to my recipe box





# Images and Alternative Text



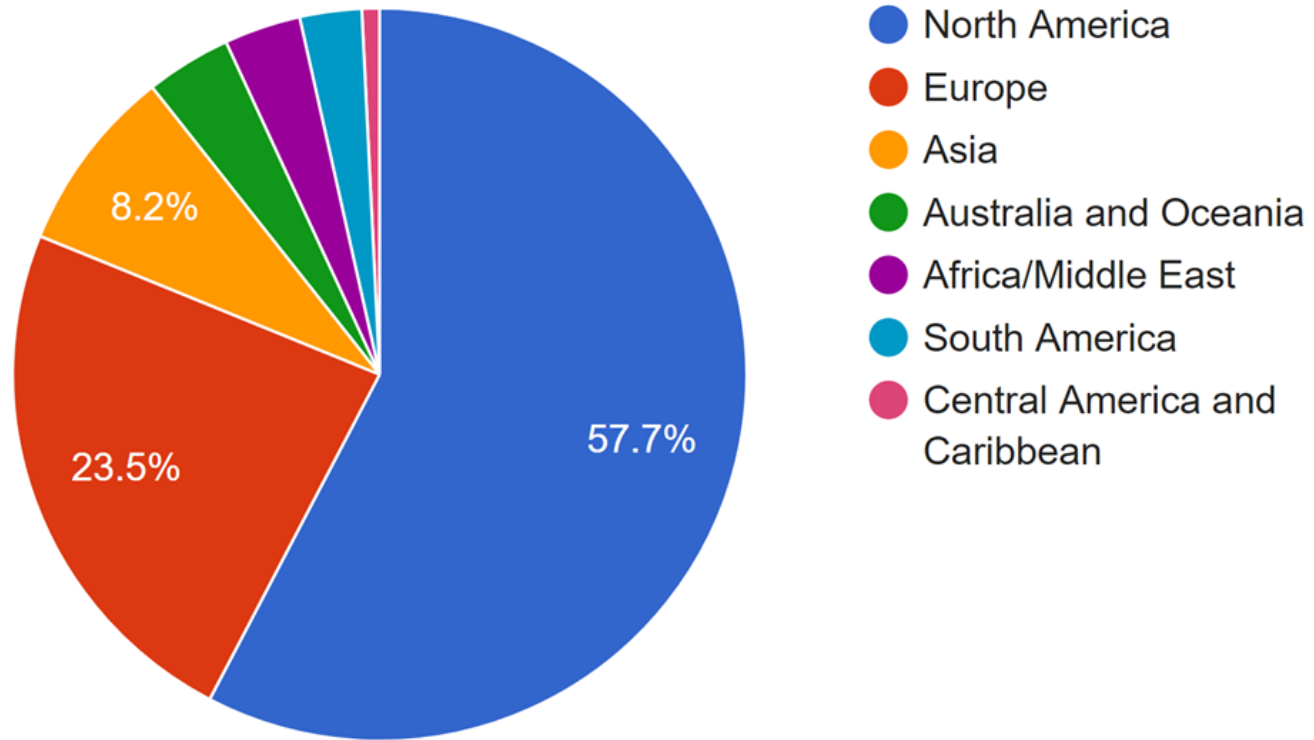
# Alternative text best practice

- Must
  - Serve the “equivalent purpose”
- Should
  - Usually be succinct
  - Use correct grammar and punctuation
- Should not
  - Be redundant
  - Start with "image of ..." or "graphic of ..."



“Students studying under a tree”?

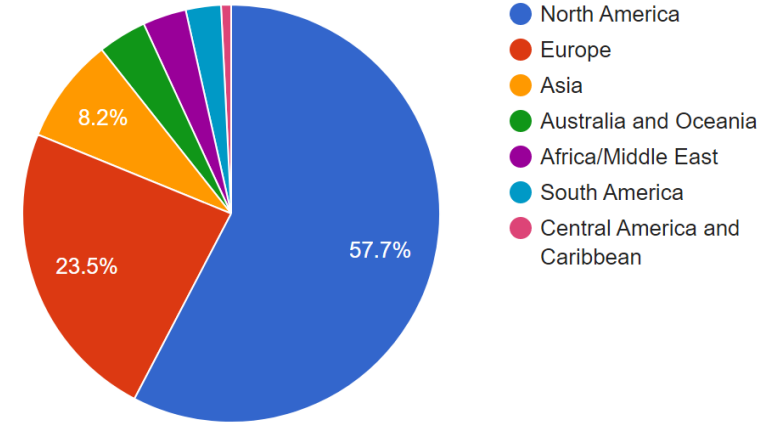
# Charts and data





# Alt text + description

1. Give the image succinct alternative text
2. Provide a detailed description
  - In context **OR**
  - Link to the information (e.g., an appendix)



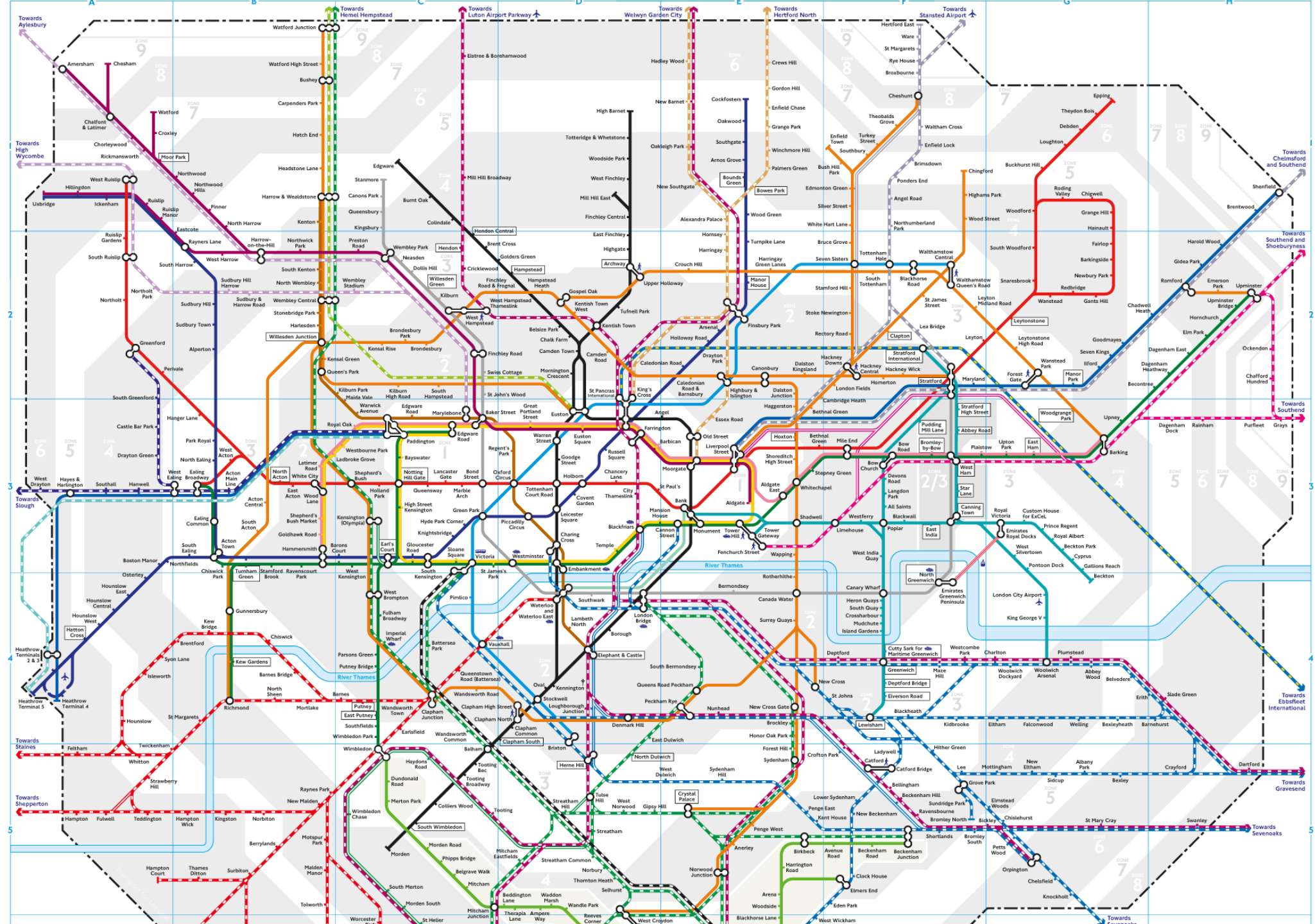
Respondent Region

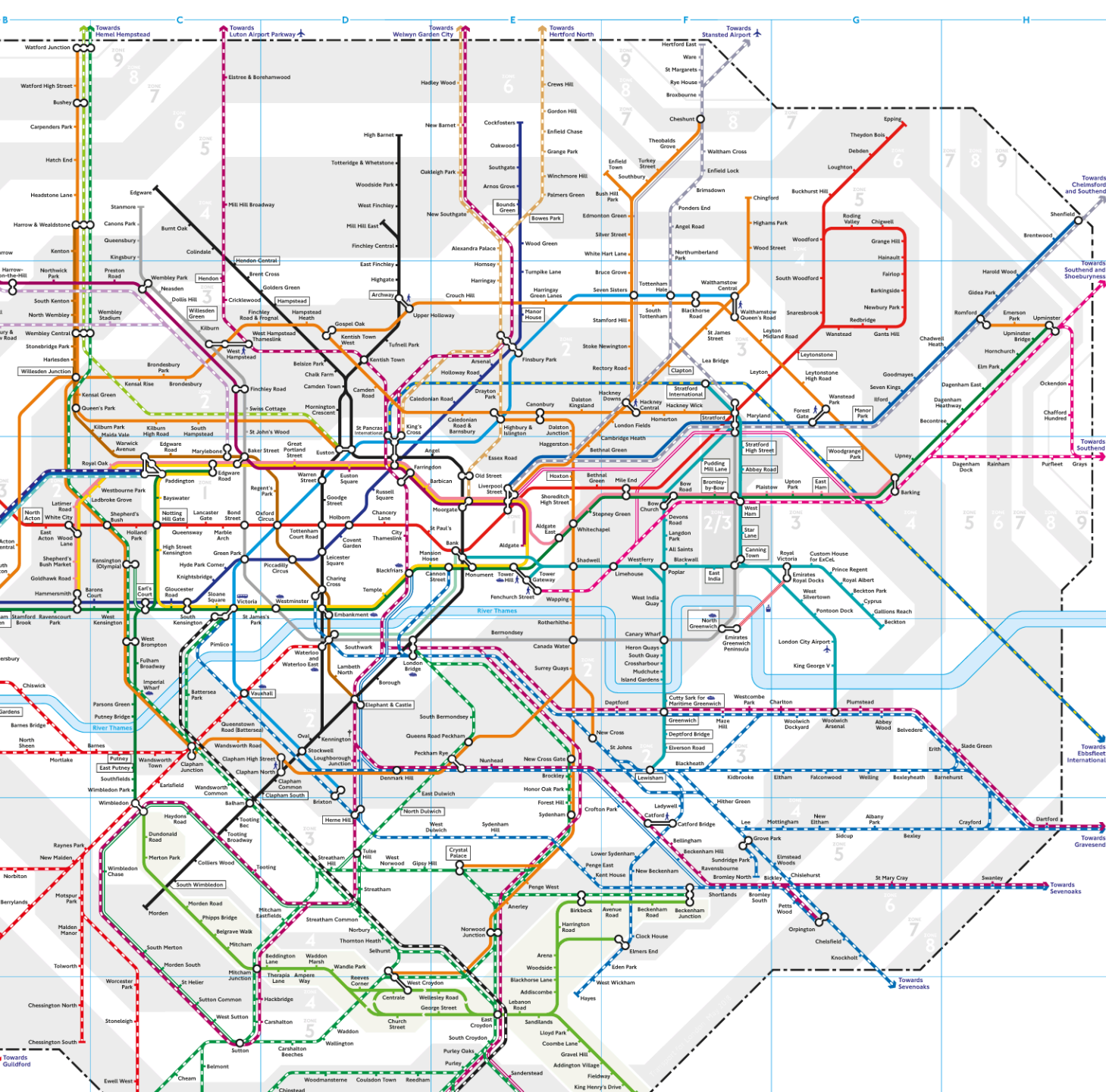
Region	# of respondents	% of respondents
North America	888	57.7%
Europe	362	23.5%
Asia	126	8.2%
Australia and Oceania	58	3.8%
Africa/Middle East	52	3.4%
South America	42	2.7%
Central America and Caribbean	12	0.8%

## London's Rail & Tube services

### Key to lines and symbols

- |   |  |                                      |
|---|--|--------------------------------------|
|  | Bakerloo                               |                                      |
|  | Central                                |                                      |
|  | Circle                                 |                                      |
|  | District                               | <u>limited service</u>               |
|  | Hammersmith & City                     |                                      |
|  | Jubilee                                |                                      |
|  | Metropolitan                           |                                      |
|  | Northern                               |                                      |
|  | Piccadilly                             |                                      |
|  | Victoria                               |                                      |
|  | Waterloo & City                        |                                      |
|  | DLR                                    |                                      |
|  | London Overground                      |                                      |
|  | London Trams                           |                                      |
|  | TfL Rail                               |                                      |
|  | Emirates Air Line cable car            |                                      |
|  | Chiltern Railways                      |                                      |
|  | c2c                                    | <u>limited service</u>               |
|  | Gatwick Express                        |                                      |
|  | Great Northern                         |                                      |
|  | Great Western Railway                  |                                      |
|  | Greater Anglia                         | <u>peak hours only</u>               |
|  | Heathrow Express                       | <u>peak hours or limited service</u> |
|  | Southern                               | <u>peak hours only</u>               |
|  | Southeastern                           | <u>peak hours only</u>               |
|  | Southeastern high speed                |                                      |
|  | South Western Railway                  | <u>peak hours only</u>               |
|  | Thameslink                             | <u>peak hours only</u>               |
|  | West Midlands Trains                   |                                      |
|  | London Trams fare zone                 |                                      |
|  | Stratford                              |                                      |
|  | Interchange stations                   |                                      |
|  | Street level transfer between stations |                                      |
|  | Airport                                |                                      |
|  | Riverboat services                     |                                      |
|  | Victoria Coach Station                 |                                      |





# “Sensory” Exception

If “non-text content  
primarily intended to  
create a specific sensory  
experience”

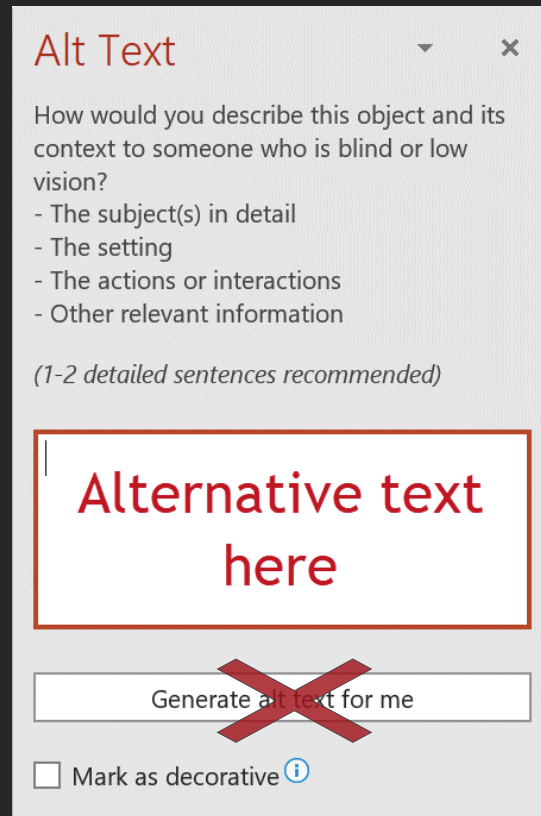
Then “Provide descriptive  
identification”

# Using Emoji

- Screen readers will read emoji 👍
- That's Good when the emoji text alternative is correct! 😄
- You can't change the text alternative 💀
- Don't overuse 🤔 🤔 🤔 🤔 🤔 🤔 🤔 🤔 🤔 🤔 🤔 🤔



# Alternative Text in Office



**Alt Text**

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)*

Alternative text here

~~Generate alt text for me~~

☐ Mark as decorative ⓘ

1. Right-click the image and choose **View Alt Text**
2. Enter appropriate alt text in the field.

DO NOT choose  
“Generate alt text for me”

# Decorative images in Office

## Alt Text

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)*

Content marked as decorative will not expose a description to screen readers.

☒ Mark as decorative ⓘ

- Check “Mark as Decorative”
  - Not available in Word online
- A screen reader will still read “graphic”
- PDF will hide images from screen reader users

# Decorative images in Office

**Alt Text** ⌵ ✕

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)*

Content marked as decorative will not expose a description to screen readers.

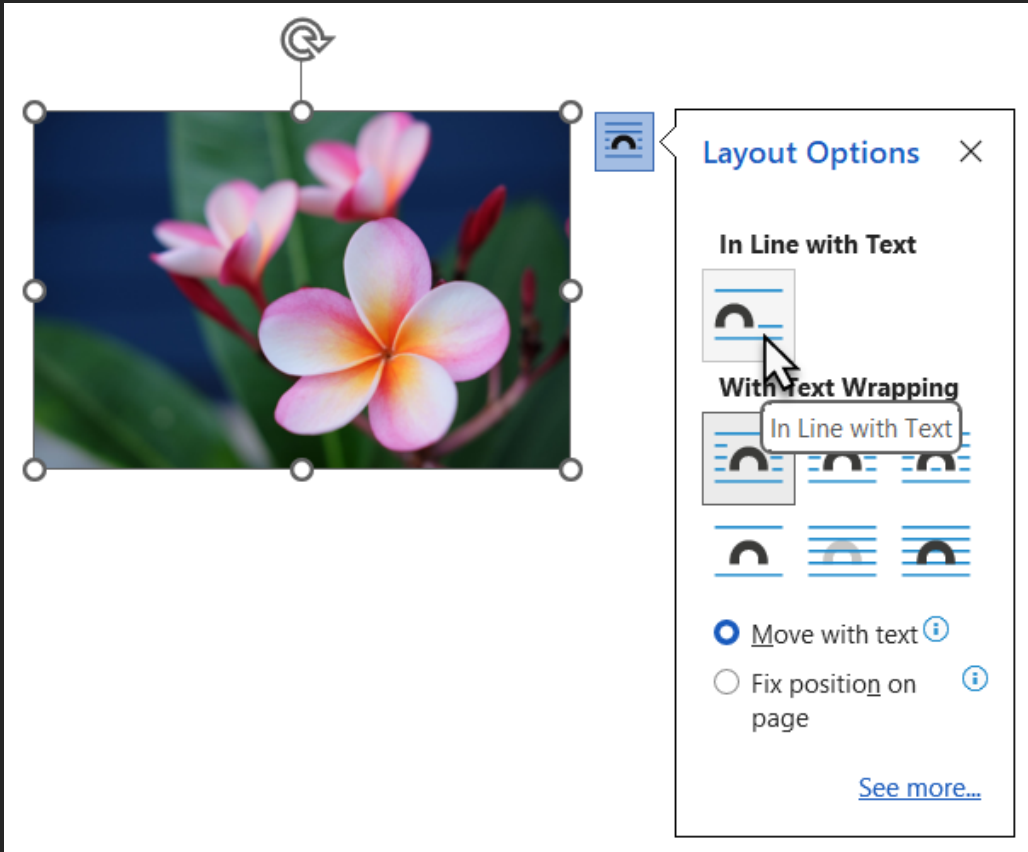
☒ Mark as decorative ⓘ

- Check “Mark as Decorative”
  - Not available in Word online
- PDF will hide images...
  - from screen reader users
  - In “Reflow” view

# Demo – Adding Alternative Text



# Image layout in Word



You can change layout from “In Line with Text” when:

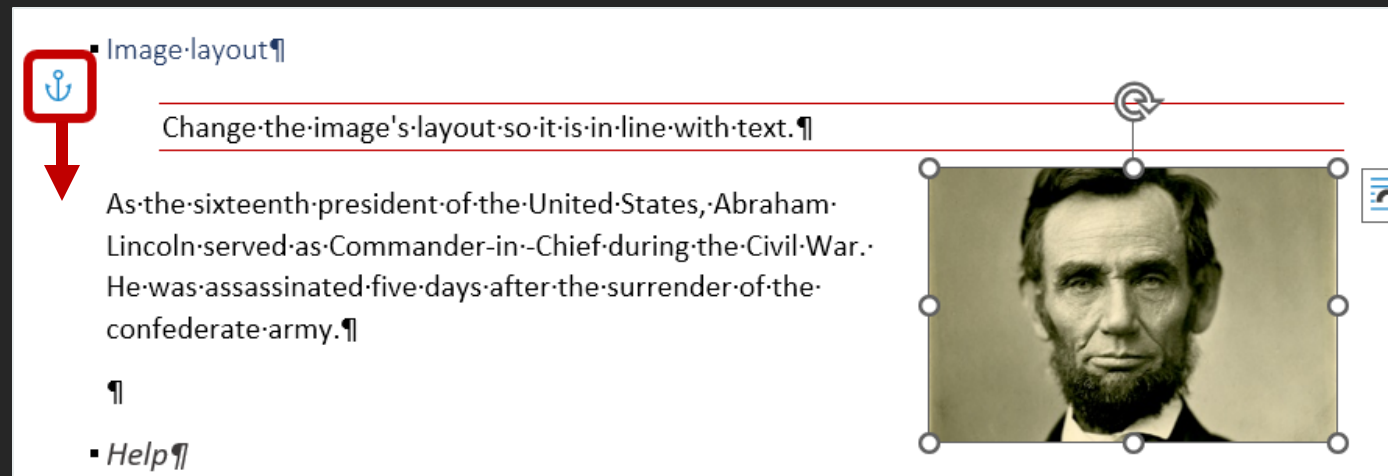
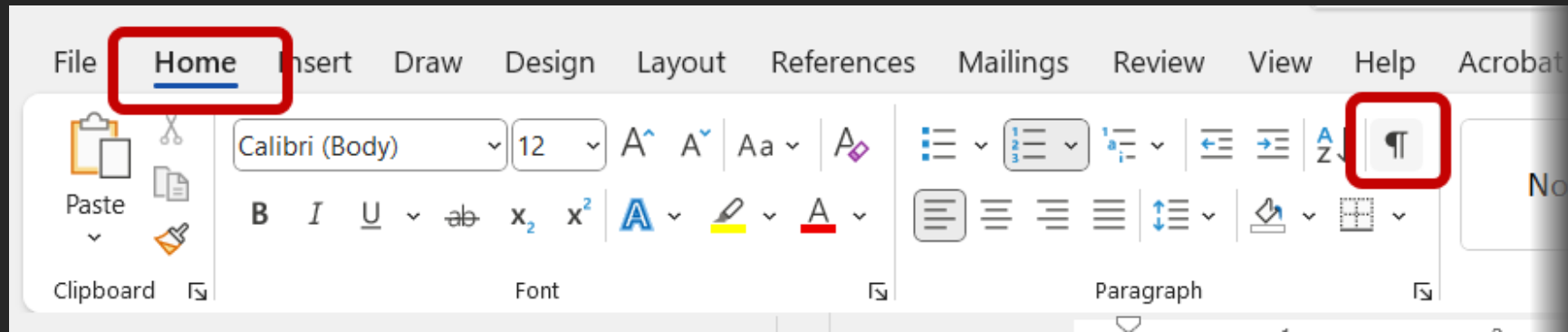
1. Using newer versions of Word 365 (with “Accessibility Assistant”)\*

**OR**

2. The Word doc will not be shared with others, only a PDF.

\* The screen reader user will also need the newer version of Word.

# ...AND the image anchor is in the right place



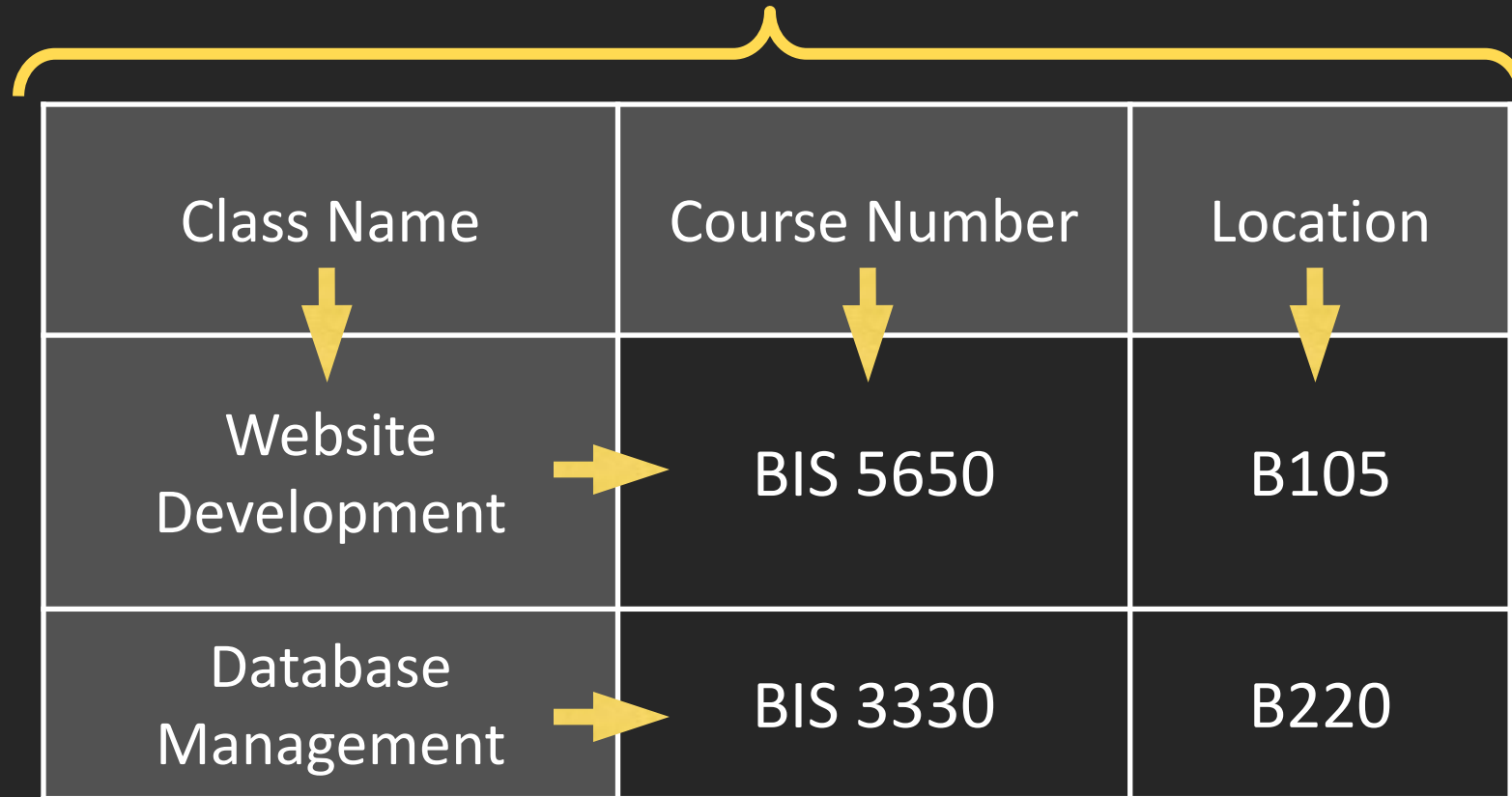
# Practice – Alternative text

# Tables



# Data table structure

## Class Schedule



Class Name	Course Number	Location
Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

Table example

# Keys to accessible tables

1. Caption (when needed)
  - (or heading if a caption isn't supported)
2. Table headers
3. Table header scope (if supported)
  - Column or row

# Assign table headers

*Heading (Word)*  
*Title (PowerPoint)* → Class Schedule

Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

# Spanned cells and multiple header levels

Section		Course #	Day	Start time	End time
BIO	→	110	→ M,W,F	08:00	9:00
	→	120	→ T,Th	09:00	11:00
BIS	→	110	→ T,Th	10:00	11:30
	→	210	→ M,W,F	12:00	13:00

Fall Semester		
Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

## Fall Semester

Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

Fall Semester		
Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220
Winter Semester		
Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

Fall Semester		
Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220
Winter Semester		
Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

The diagram illustrates a course progression path using yellow arrows. In the Fall Semester, a vertical arrow points from the 'Fall Semester' header down to the 'Advanced Website Development' row, and another vertical arrow points from the 'Advanced Website Development' row down to the 'Database Management' row. In the Winter Semester, a horizontal arrow points from the 'Database Management' row to the 'BIS 3330' course number, and a vertical arrow points from the 'Advanced Website Development' row down to the 'BIS 3330' course number. Additionally, a vertical arrow points from the 'Winter Semester' header down to the 'Advanced Website Development' row, and another vertical arrow points from the 'Advanced Website Development' row down to the 'Database Management' row.



## Fall Semester

Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

## Winter Semester

Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

# Demo – Table headers and styles

## Class Schedule

Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

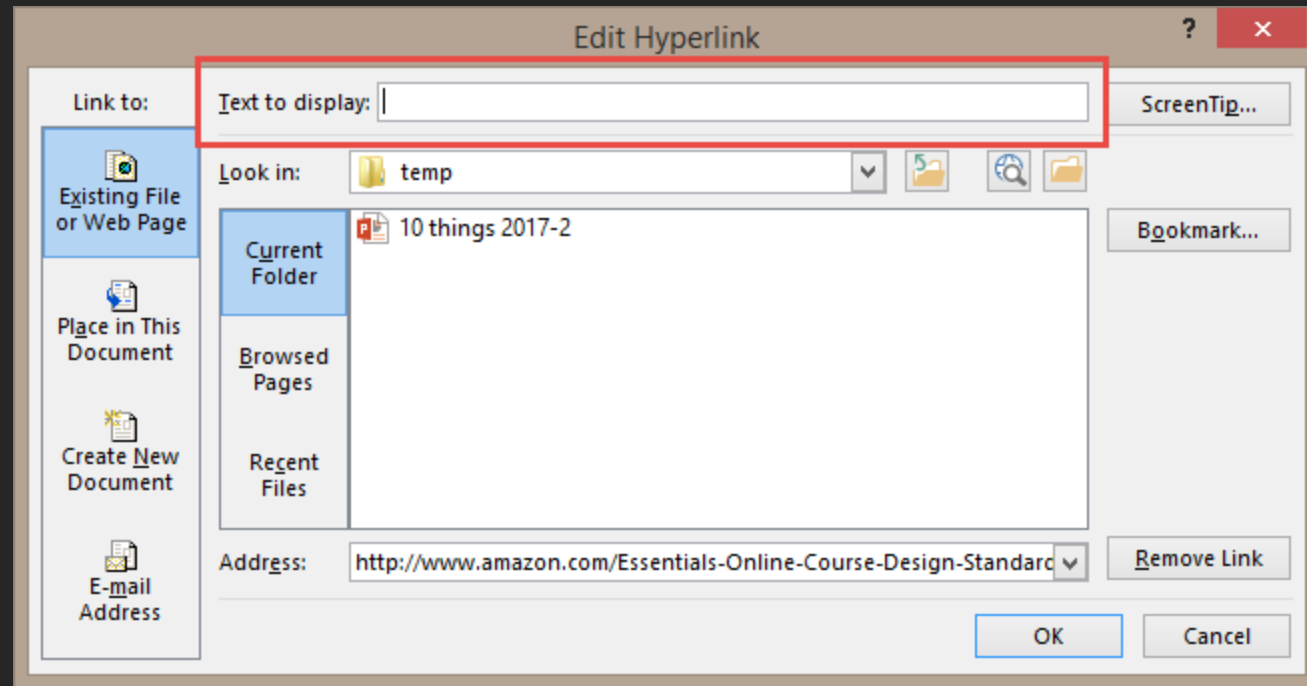
# Other Principles

- You cannot assign table headers in Google Docs/Slides/Sheets
- Avoid layout tables
  - If you have them, uncheck “Header Row” and “First Column”
- Avoid empty headers
- Tables with multiple levels of headers will need repair in Acrobat.

# Descriptive Link Text

- [Click here](#)
- [Click here](#) for our campus map
- [Click here for our campus map](#)
- [Campus map](#)

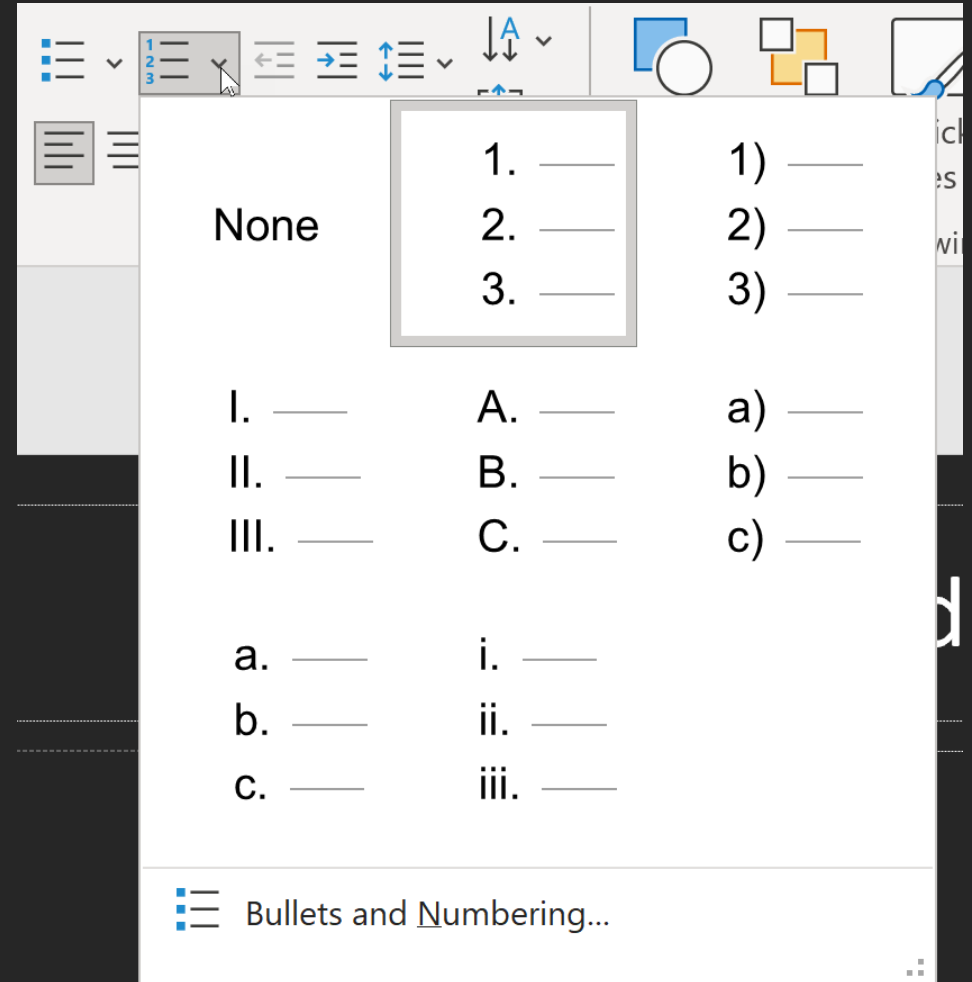
# Editing Link Text



Right-click > Edit Link > Text to display

# Lists

- Content presented visually as a list must be a true list.
- Bullets: Equal importance
  - Can you reorder the items?
- Numbers: Order or hierarchy



# EASY SHORTBREAD



## Ingredients

- 1 cup butter, softened
- 1/2 cup sugar
- 2 1/2 cups flour

## Directions

1. Preheat the oven to 300° F.
2. Cream butter and sugar.
3. Gradually stir flour into the creamed mixture until blended.
4. Pat the dough in the bottom of an ungreased 9x13 baking pan.
5. Bake at 300 F for 30 to 40 minutes, until just lightly browned.
6. Remove from oven and pierce all over with a fork.

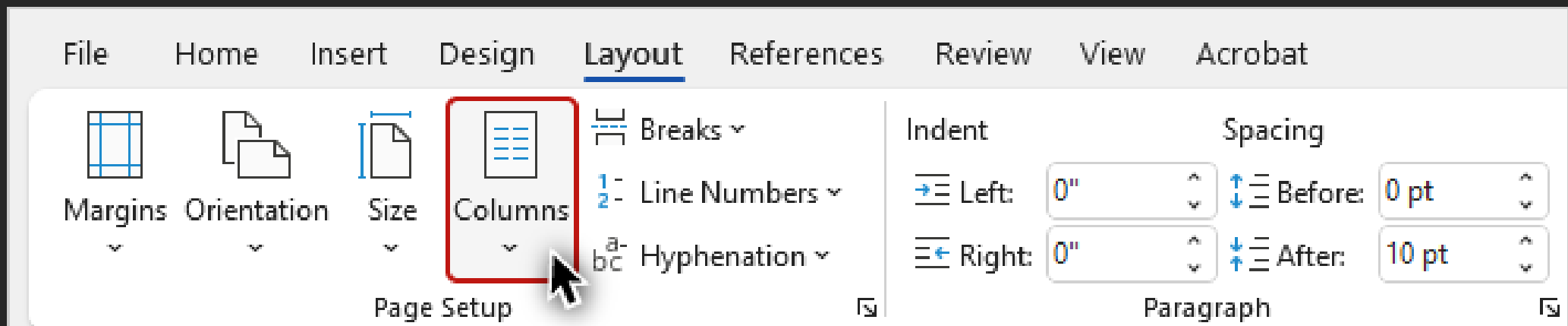
# Demo - 4 Steps to Create Lists in Office:

- Decide what type of list you should use—bulleted or numbered
- Highlight text
- Choose the correct list type
- Spend the 5 minutes fixing auto-numbering 😊



# Columns

- Ensures proper reading order
- Word: **Layout** tab > **Columns**
- PowerPoint: **Home** tab > **Columns**
  - or “Two Content” layout instead of inserting a second text box
  - No column options in online version



# Demo - Columns

- Headings
- Alternative text for images
- Links
- Lists
- Tables
- Columns
- Captions
- Text size
- Contrast
- Color reliance
- Language
- Document title
- Forms
- Frames
- Buttons

# Text language

Most people today can hardly conceive of life without the internet. Some have argued that no other single invention has been more revolutionary since Gutenberg's printing press in the 1400s. Now, at the click of a mouse, the world can be “at your fingertips”—that is, if you can use a mouse... and see the screen... and hear the audio—in other words, if you don't have a disability of any kind.



# Set correct text language

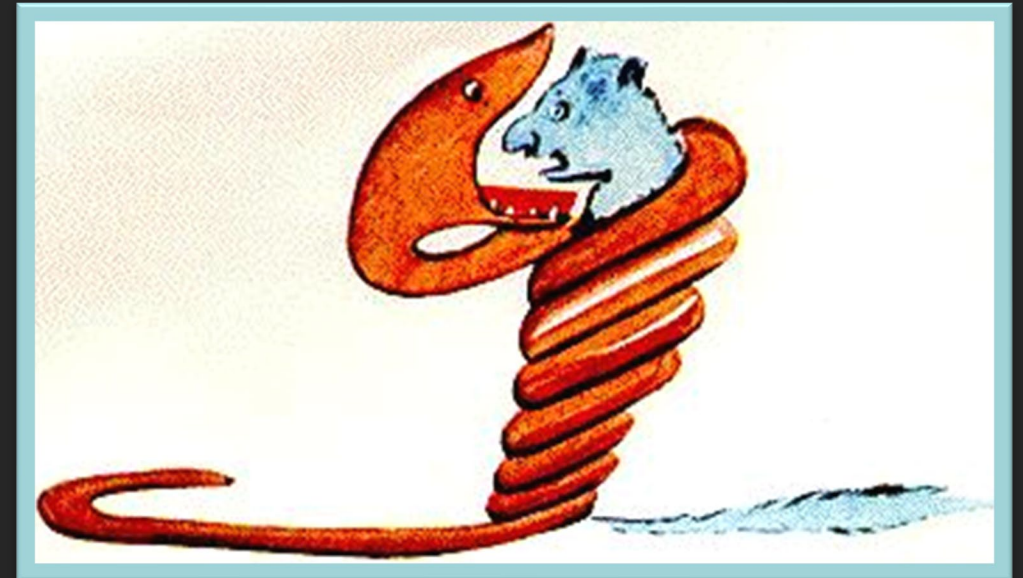
- Windows: Select the text. On the **Review** tab, select **Language** > **Set Proofing Language**
  - Choose the most “typical” language version (e.g., “Spanish (Spain)”, not “Spanish (United States)”)
- Mac: Select the text. On the **Review** tab, select **Language**
- To set the language of an entire Word Document : Select all (Ctrl/command + A), then follow the above steps

# Demo – Set Language

Highlight the text, **Review** tab > **Language** > **Set Proofing Language**

---

*Lorsque j'avais six ans j'ai vu, une fois, une magnifique image, dans un livre sur la Forêt Vierge qui s'appelait "Histoires Vécues". Ça représentait un serpent boa qui avalait un fauve. Voilà la copie du dessin.*



Practice – Tables, links, lists,  
columns, and language

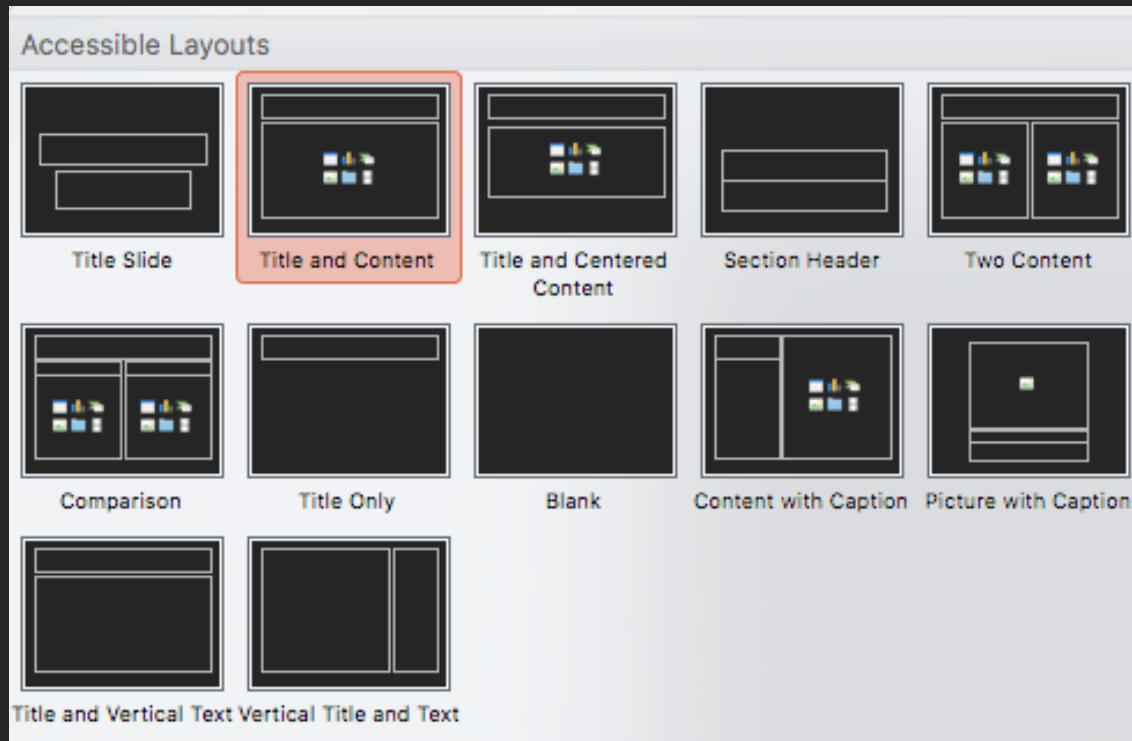


# Where are the Headings in PowerPoint?



# Use Layouts

- Correct reading order
- Consistent presentation
- Easy navigation in PowerPoint
- Slide “title”= PDF heading

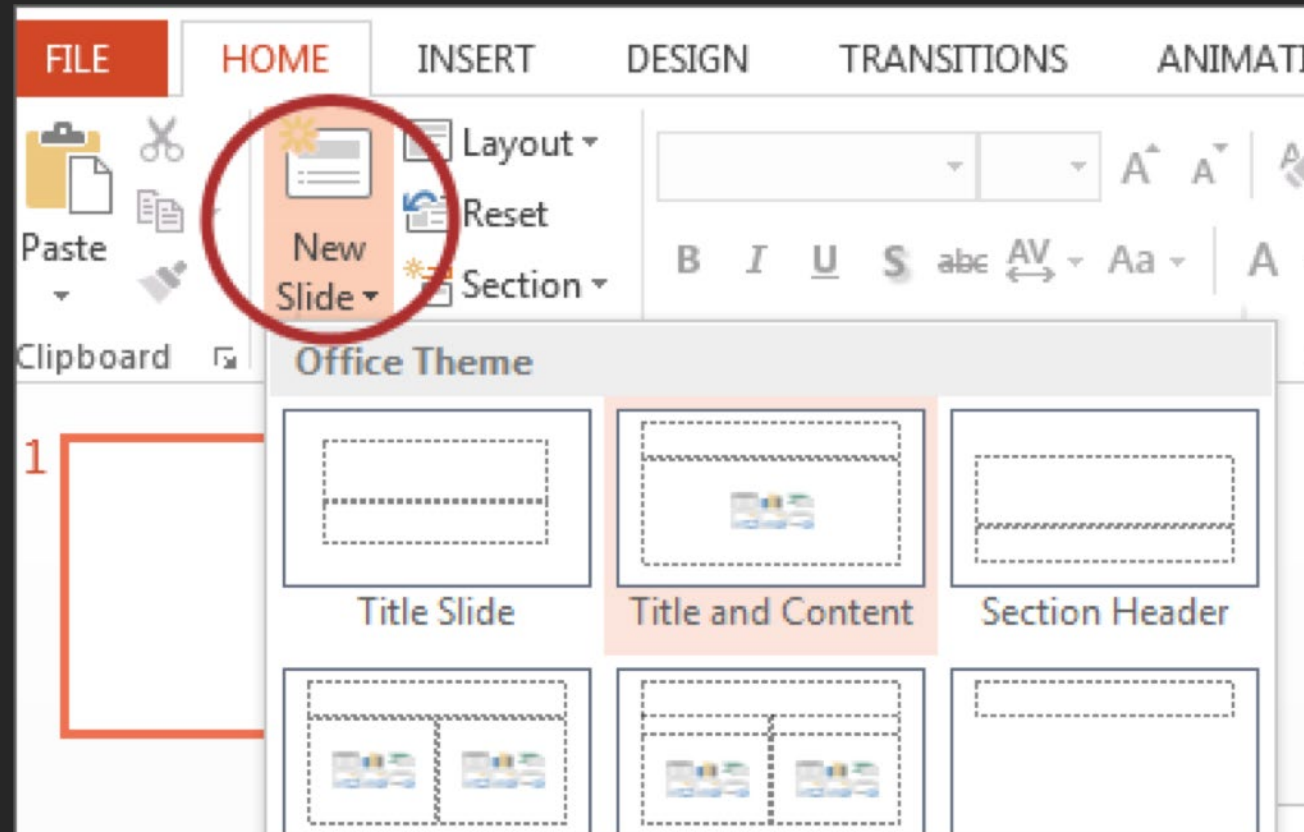




# Slide Titles and PDF Headings

- Only 1 title per slide
- PDF Heading 1
  - “Title Slide” layout
  - “Section Header” layout
  - The first title in a new section
- PDF Heading 2
  - Any other slide title

# New Slide > Layout

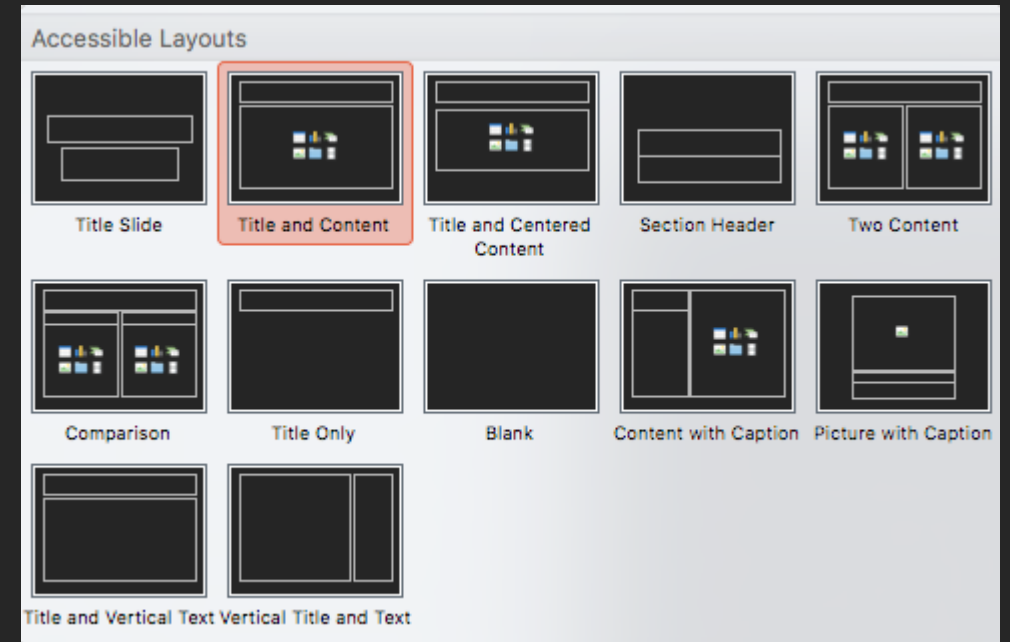


Demo – New Slide



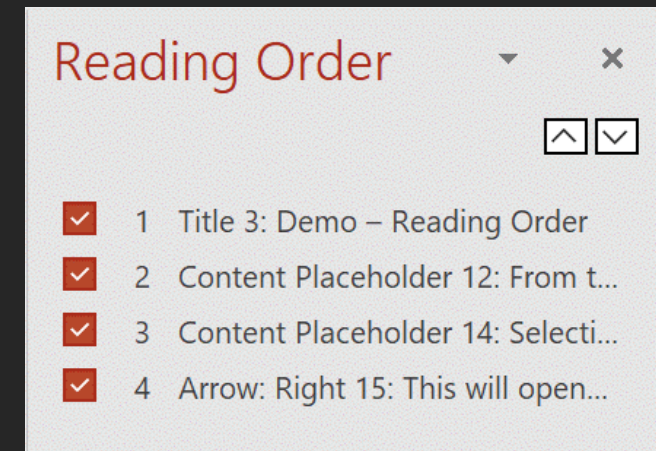
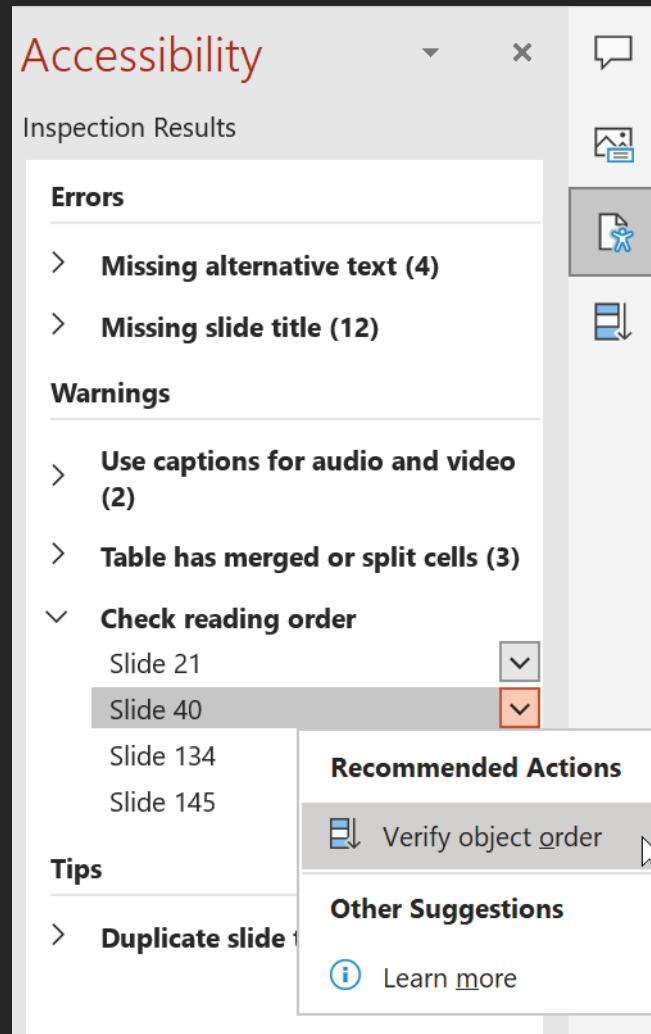
# Demo – Apply slide layout

1. Select correct layout
2. Put “heading” text in the title placeholder
3. Move content into the content placeholder



# View & Change Object Order

# Reading Order Pane (Recommended)



# Demo – Reading Order Pane

**Accessibility**

Inspection Results

**Errors**

- > Missing alternative text (4)
- > Missing slide title (12)

**Warnings**

- > Use captions for audio and video (2)
- > Table has merged or split cells (3)
- ✓ Check reading order
  - Slide 21
  - Slide 40
  - Slide 134
  - Slide 145

**Tips**

- > Duplicate slide

**Recommended Actions**

- Verify object order

**Other Suggestions**

- Learn more

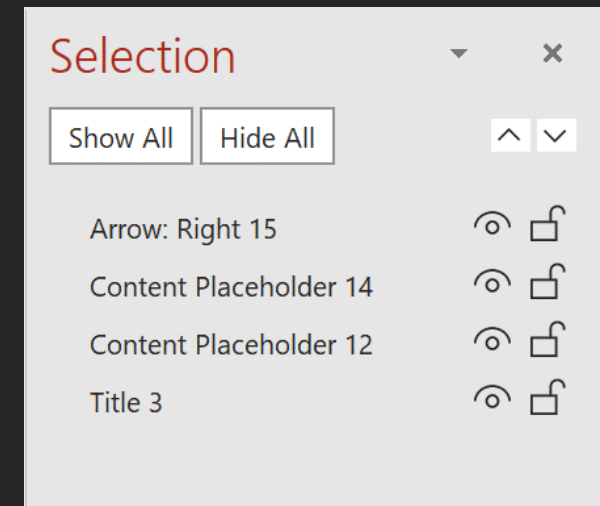
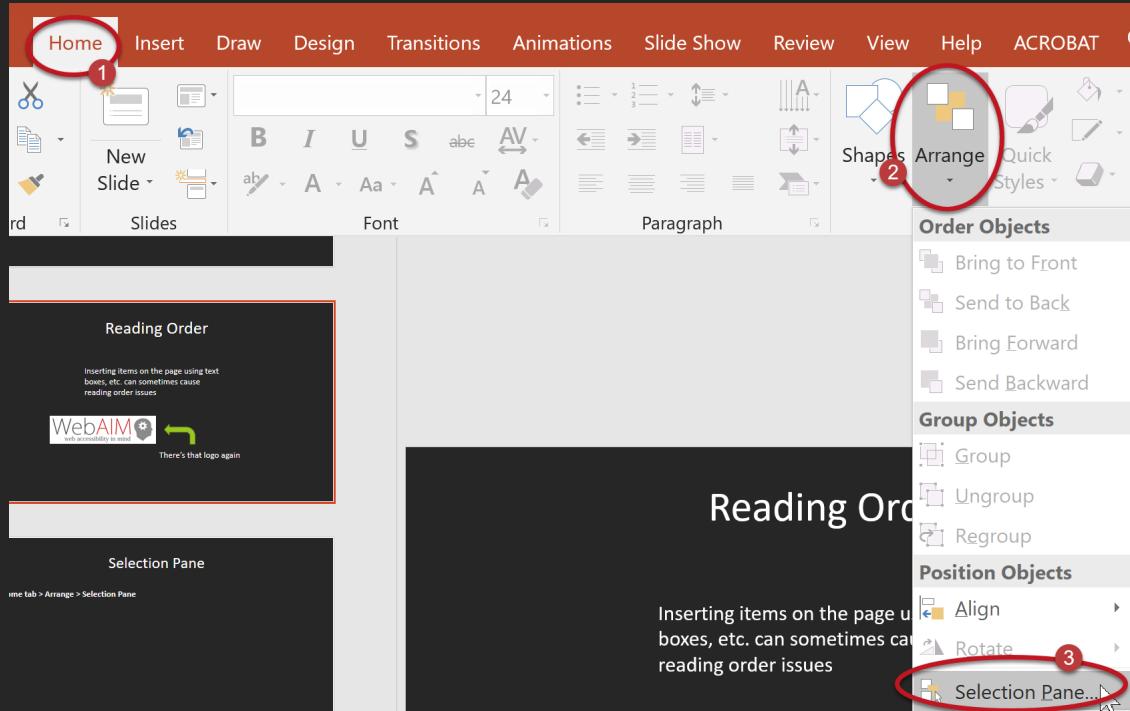


**Reading Order**

- ✓ 1 Title 3: Demo – Reading Order
- ✓ 2 Content Placeholder 12: From t...
- ✓ 3 Content Placeholder 14: Selecti...
- ✓ 4 Arrow: Right 15: This will open...



# Online/Older Mac – Selection Pane



(Also available on Windows and Mac)

# Content Order in the Selection Pane

The object on a slide's

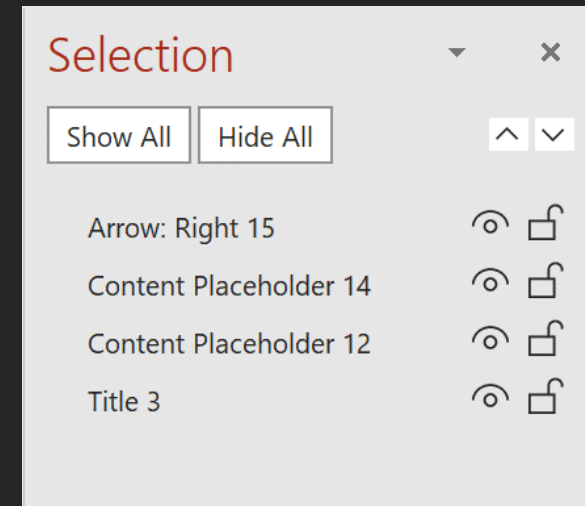
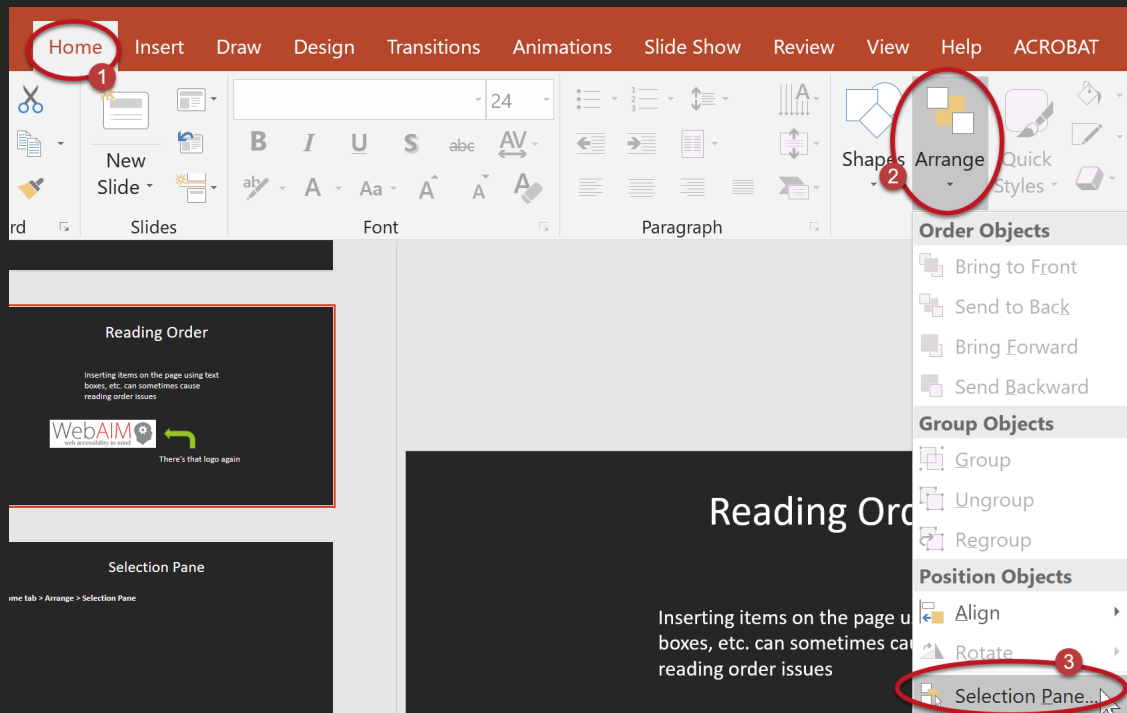
**bottom layer**

...is **read first** by a

screen reader.



# Demo – Selection Pane



# Slide Master

- View tab > Slide Master
- Master – All slides
- Create new “Layout”
- Include title placeholder
- Check reading order



Practice – Layouts and reading order

# Tomorrow's outline

- Contrast
- Color use
- Cognitive disabilities
- PDF Structure
- Converting to PDF
- Evaluating and Repairing a PDF in Acrobat Pro

# Other Accessibility Principles

Low Vision



# “Images of Text”



Let's connect on LinkedIn!

# Provide Sufficient Contrast

[WebAIM contrast article](#)

21:1

21:1

# Level AA Contrast Examples

**4.5:1**

Gray on White

Purple on White

Red on Yellow

**3:1 – “Large” text**

≥18pt

**BOLD: ≥14pt**

# “Images of text”

50 most played  
songs by genre





A serene winter scene featuring a snow-covered landscape with several evergreen trees heavily laden with snow. The trees are scattered across the frame, with some in the foreground and others in the background. The sky is a pale, hazy blue, and the overall atmosphere is quiet and cold. The text is overlaid on the lower half of the image, centered horizontally.

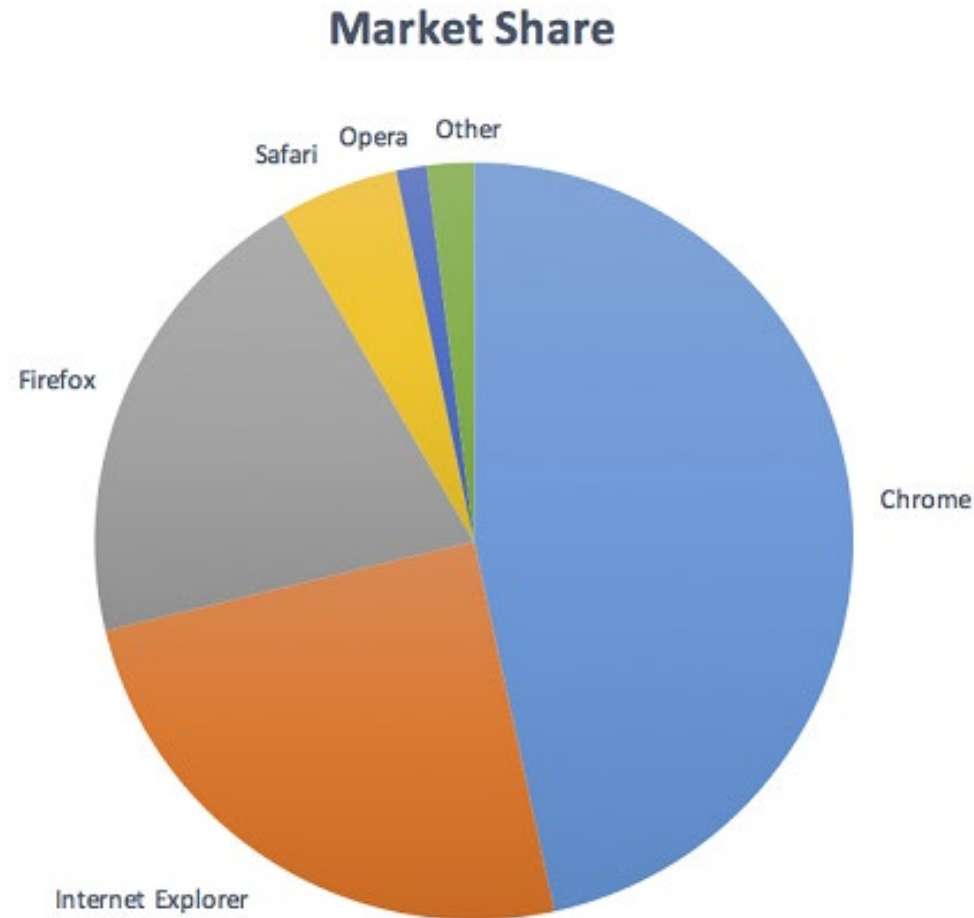
This text is hard to read,  
and it fails WCAG



A serene winter scene featuring a snow-covered landscape with several evergreen trees heavily laden with snow. The sky is a pale, hazy blue, and the overall atmosphere is quiet and cold. The text is overlaid on the lower half of the image.

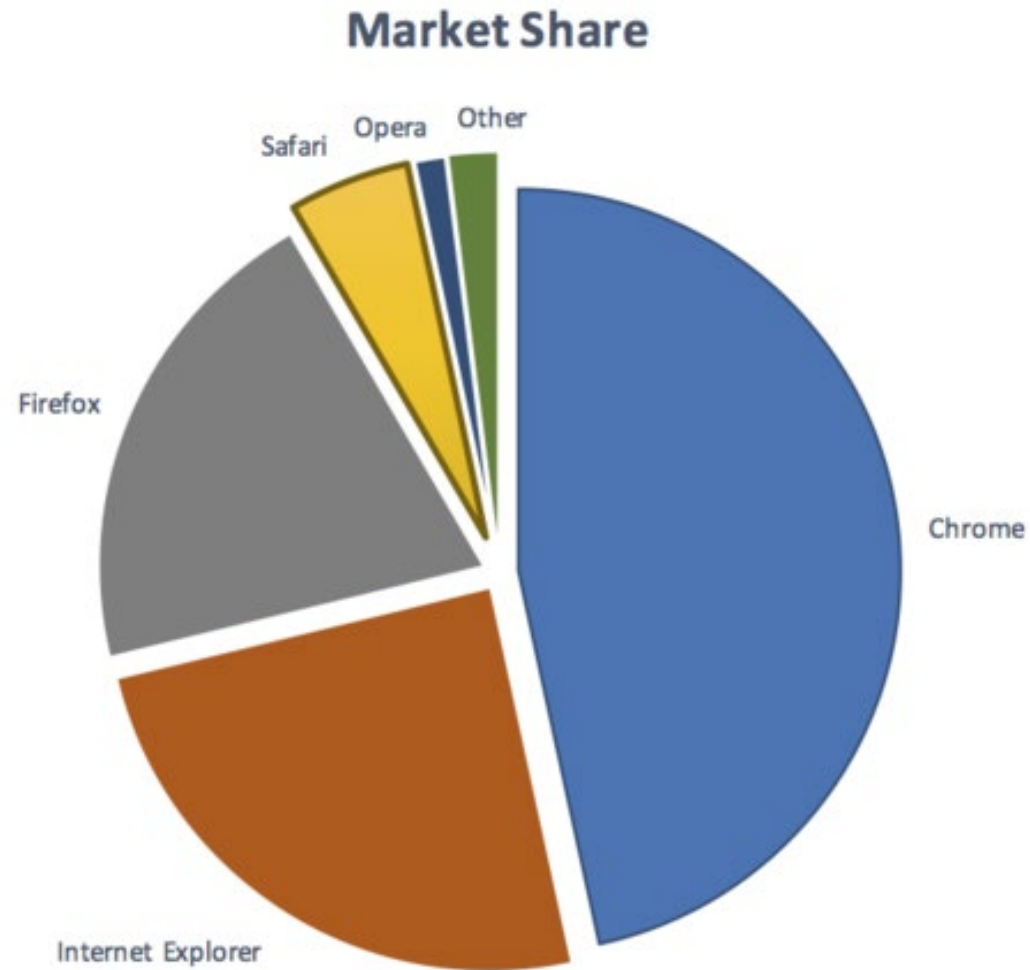
This text is hard to read,  
~~and it fails WCAG~~

# 3:1 Contrast of “Graphical Objects”

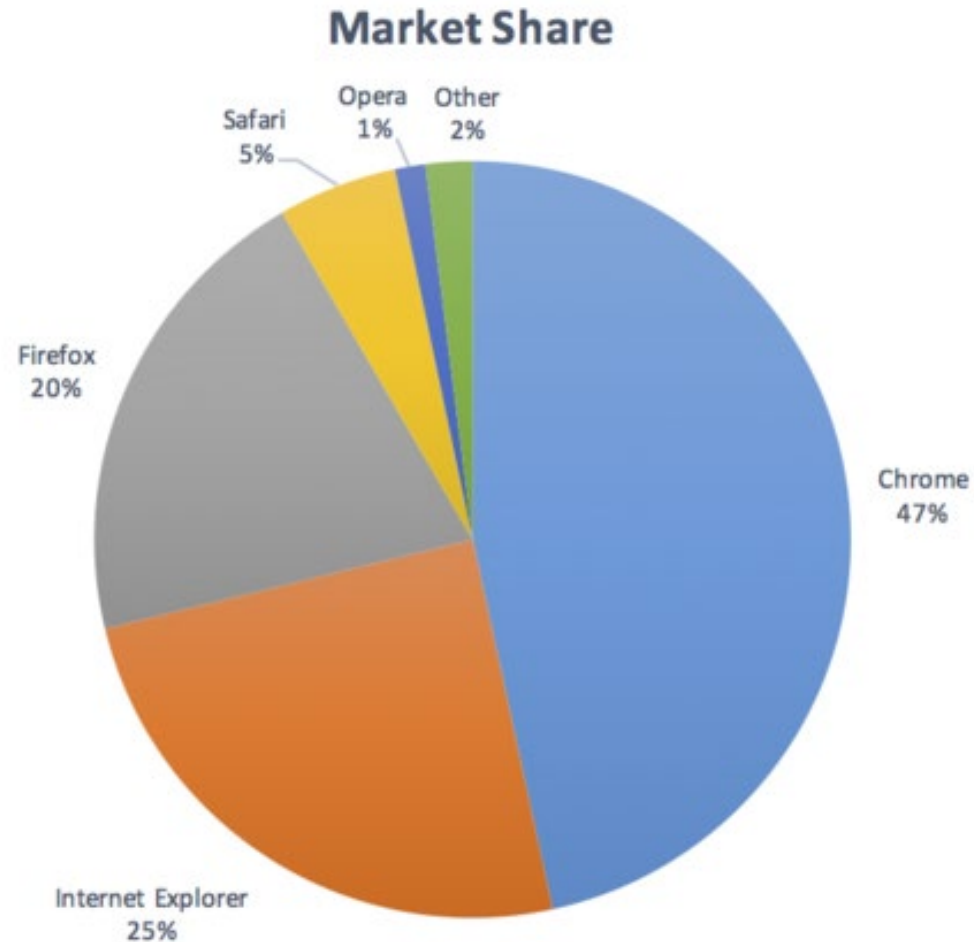




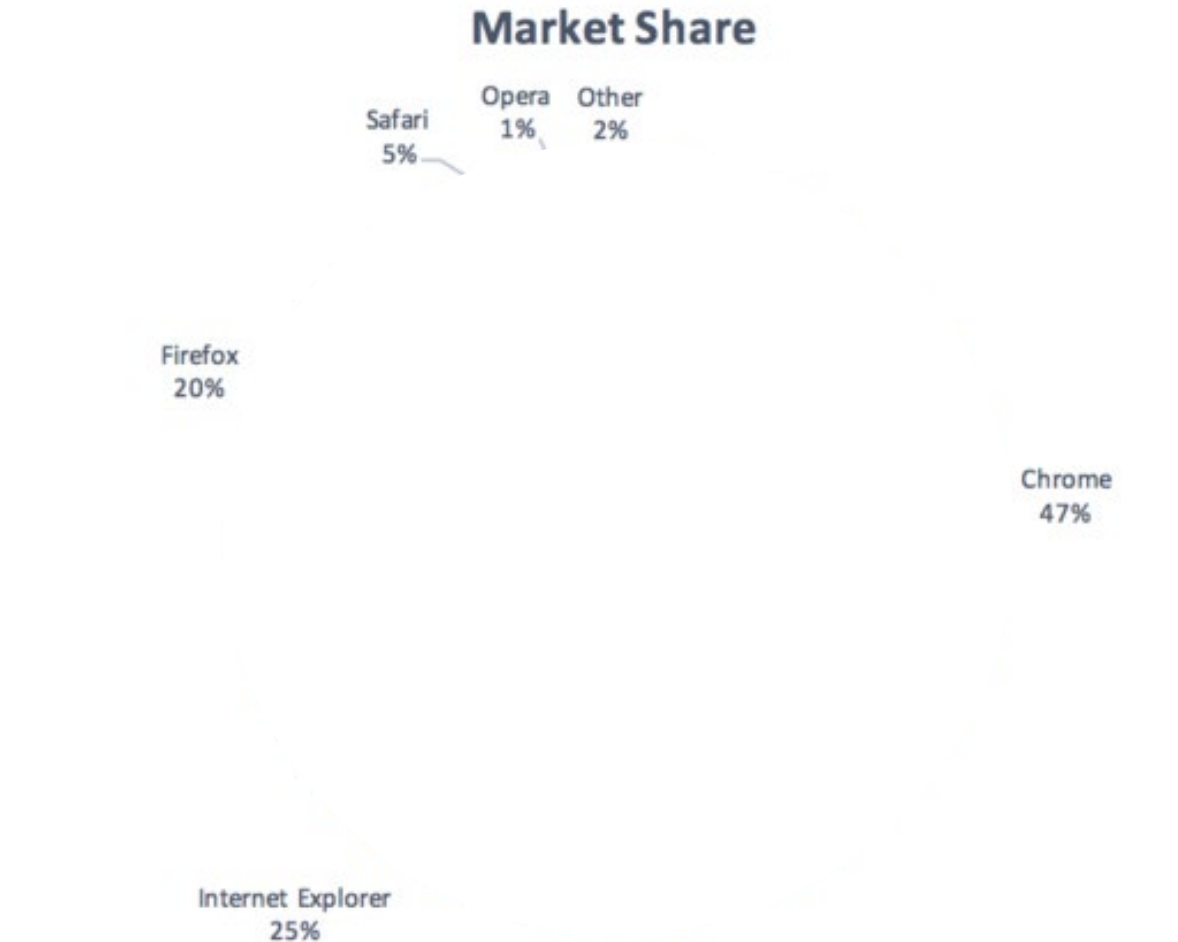
“Against Adjacent color(s)”



“...required to understand”



“...required to understand”



# Exceptions

# “Logotypes”

50 most played  
songs by genre





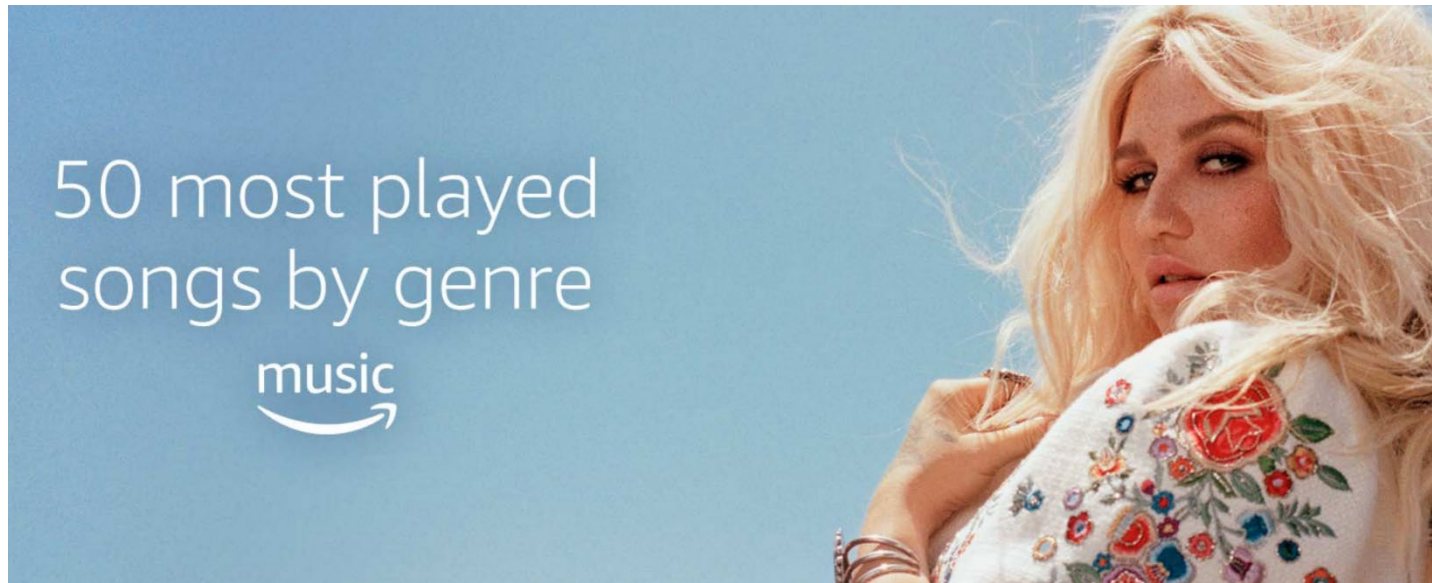
“Pure decoration”



# “Essential”

Good, Bad and Neutral					
Normal	Bad	Good	Neutral		
Data and Model					
Calculation	Check Cell	Explanatory ...	Input	Linked Cell	Note
Output	Warning Text				
Titles and Headings					
Heading 1	Heading 2	Heading 3	Heading 4	Title	Total
Themed Cell Styles					
20% - Accent1	20% - Accent2	20% - Accent3	20% - Accent4	20% - Accent5	20% - Accent6
40% - Accent1	40% - Accent2	40% - Accent3	40% - Accent4	40% - Accent5	40% - Accent6
60% - Accent1	60% - Accent2	60% - Accent3	60% - Accent4	60% - Accent5	60% - Accent6
Accent1	Accent2	Accent3	Accent4	Accent5	Accent6
Number Format					
Comma	Comma [0]	Currency	Currency [0]	Percent	

# Demo – Evaluating Contrast



- This text is 14pt and bold
- It meets WCAG's "large text" definition
- It should have more contrast

[webaim.org/resources/contrastchecker](https://webaim.org/resources/contrastchecker)



# “Use of Color”

The green mushrooms listed here are okay to eat. The red mushrooms are poisonous.

- Amanita
- Chanterelle
- Porcini
- Shiitake
- Tylopilus

# How can we fix this?

The green mushrooms listed here are okay to eat. The red mushrooms are poisonous.

- Amanita
- Chanterelle
- Porcini
- Shiitake
- Tylopilus

# Separate lists

## Safe

- Chanterelle
- Porcini
- Shiitake

## Poisonous

- Amanita
- Tylopilus

# Icons (with alternative text)

- Amanita 
- Chanterelle
- Porcini
- Shiitake
- Tylopilus 

# Emoji

The green mushrooms listed here are okay to eat. The red mushrooms with 🦴 are poisonous.

- Amanita 🦴
- Chanterelle
- Porcini
- Shiitake
- Tylopilus 🦴

# Bold or Italicized text?

- *Amanita*
- Chanterelle
- Porcini
- Shiitake
- *Tylopilus*

# Two separate requirements

1. Ensure there is enough contrast
2. Do not rely on color alone
  - Don't remove underline from links

# Multimedia



# Media Accessibility Requirements

- Multimedia:
  - Captions for audio-only information
  - Audio description for video-only information
  - Transcript is optional
- Audio-only: Transcript
- Video-only: Transcript or audio description



# Captions



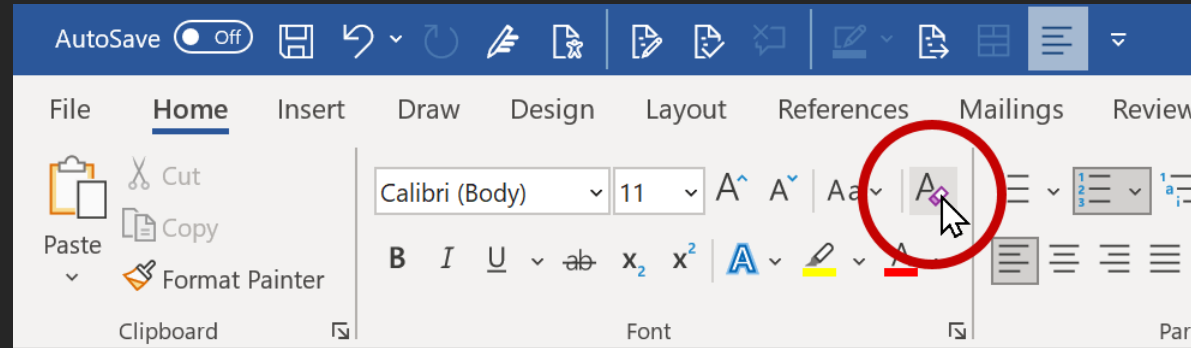
TO THE SECRET LAB!

# Audio Description



AND I'M ONE OF  
THOSE TWO, RIGHT?

# Another option: Speak important content

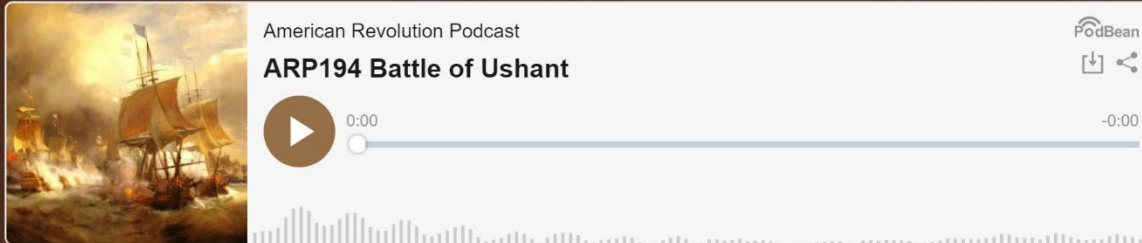


1. Action: “Click”
2. Name: “Clear All Formatting”
3. Description: “Letter A with an eraser”
4. Location: “In the Font area of the Home tab”

[Tips for Accessible Screen Sharing](#)

# Transcript

## ARP194 Battle of Ushant



After Britain and France went to war in the spring of 1778, America became a sideshow to the main event. Britain and France had been traditional enemies for centuries. Part of it was the whole Catholic-Protestant rift that had divided Europe. Part of it was conflicting claims over each other's countries. King George III still held the title of King of France, a claim that dated back more than 400 years. Although the British Channel kept the two kingdoms separated, there was a continuing rivalry between the two countries that simply would not end.

In the prior decades most of the fighting had been fought over colonies around the world. Britain and France traded colonies in wars back and forth. North America was only one pawn in that larger game of chess.

In the hundred years prior to this war, Britain and France had faced off in at least five major wars, totaling 39 years of fighting. These were a continuation of centuries more fighting between the two kingdoms.

In the Seven Years War, the British Navy had dominated the French at sea. That was a big reason why France lost North America. In the intervening years, France focused on rebuilding her navy to compete with the British. France, which had three times the population of Britain, thought that



Battle of Ushant

- “Alternative for Time-based Media” in WCAG
- Not synchronized
- WCAG requirements:
  - Audio-only: Transcript
  - Video-only: Transcript or audio description
  - Multimedia: Transcript not required until AAA, but recommended

[WebAIM article on transcripts](#)

Additional benefits of  
captions and transcripts?

# Cognitive/Learning Disabilities

- Largest disability group.
- Most of the earlier principles can make content more understandable.
  - Captions, contrast, color, headings, lists, simple tables, etc.
- Because users' needs vary greatly, we will focus on general recommendations.

# Make Content “Understandable”

- Use plain language
  - “readable to users with a lower secondary reading level” (WCAG AAA)
  - Write for your audience
- Small text negatively impacts readability
  - WCAG has no min. text size requirement
- Choose legible fonts



# Typefaces and Fonts

C vs O

C vs O

e vs o

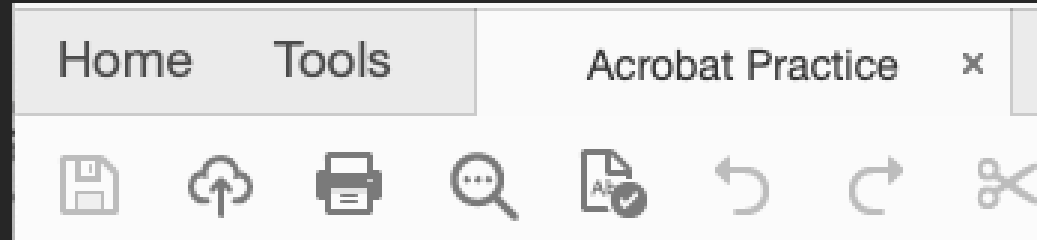
e vs o

l vs l vs l

I vs l vs 1

Each new typeface **INTRODUCES**  
*additional cognitive overhead.*

# Descriptive Document Title



- Office uses Filename instead of title. Make it descriptive when you can.
  - E.g., descriptive-title.docx
- Titles required in PDF. Add them in Office and they *may* be added when converting to the PDF.
  - Mac: **File** application menu (not tab) > **Properties** > **Title**
  - Windows: **File** tab > **Info** > **Title**

Practice contrast, color,  
and document title in Word

PDF accessibility

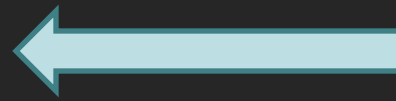
Does it need to be a PDF?



3 PDF “layers”

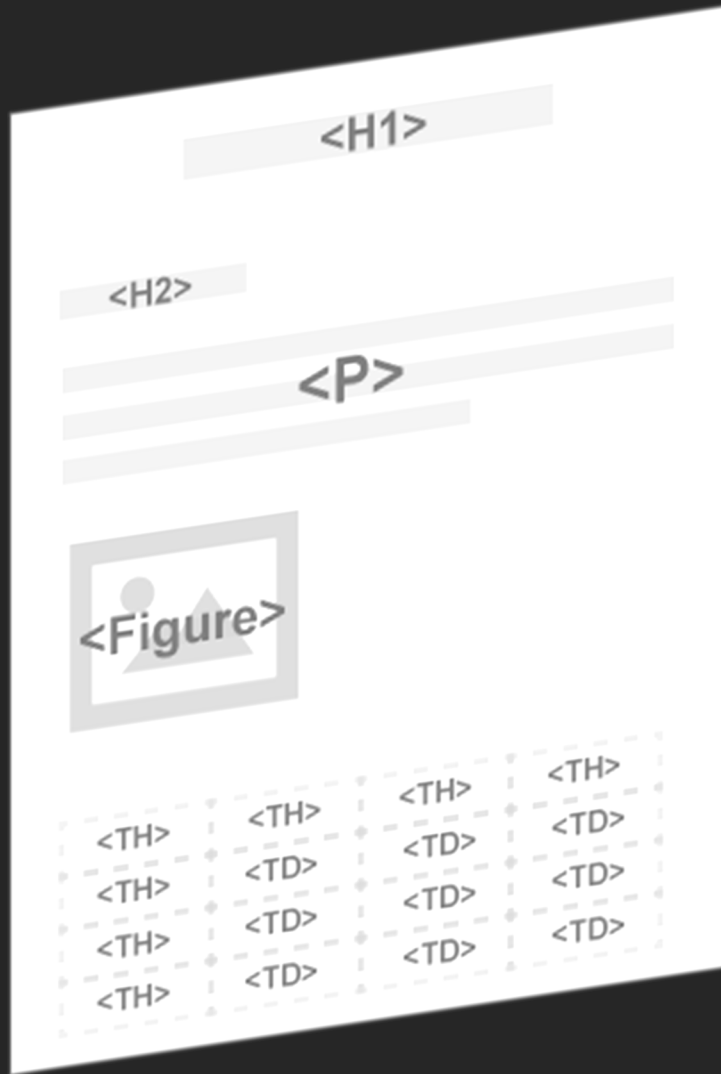


Visual



Content





← Tags

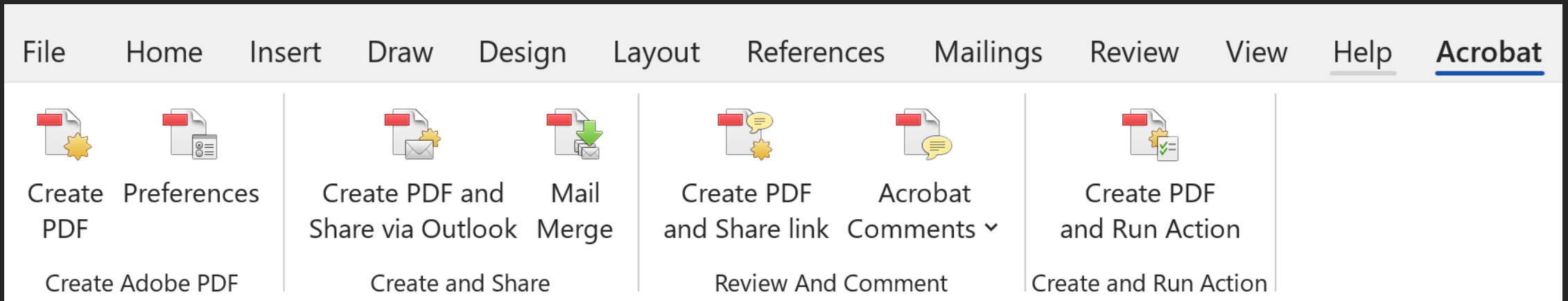
# PDF Conversion

- Word & PowerPoint – Great accessibility
- InDesign – Good accessibility (with a lot of work)
- Google Docs – Decent accessibility
- Google Slides – No Tags
- Canva – Inconsistent
- Print – No tags

# Office-to-PDF

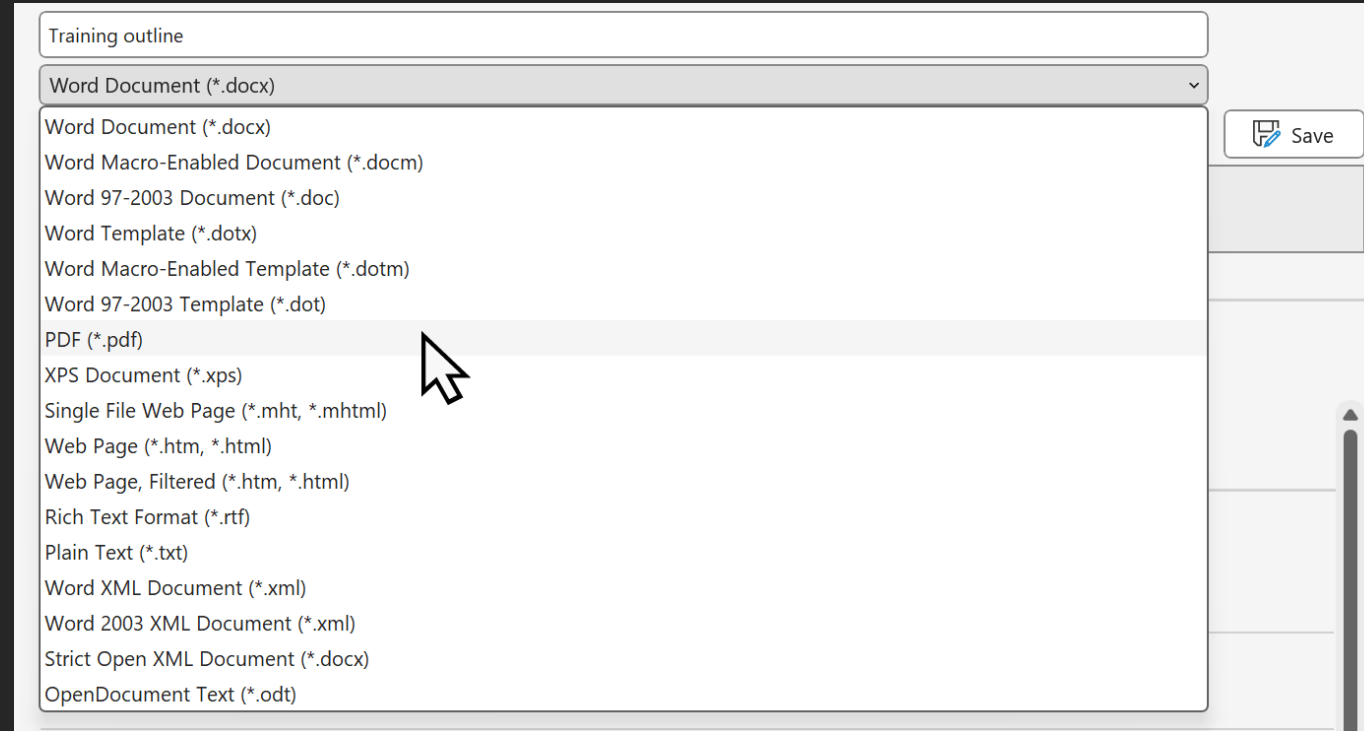
- Headings
- Alternative text for images
- Hide decorative images
- Tables
  - Fix complex tables in Acrobat
- Columns
- Language
- Contrast
- Color Use
- Links
- Lists
- Document title
  - Broken right now
- Etc.

# Acrobat Tab in Office



Not suited for documents with complex images, but more Acrobat-friendly

# Built-In "Save As" and Export Options



Best for documents with complex images, but not as Acrobat-friendly

# Evaluating and repairing PDF accessibility in Acrobat Pro