

Disclaimer

This file includes has some accessibility problems. We will demonstrate how to repair these issues through the course of the training.

Web/Document Accessibility Training



Jonathan Whiting and John Northup

WebAIM.org

Are you a...

- Developer
- Designer
- Web content creator/author
- Project manager
- Something else?

True or False?

Accessible web design only benefits a small percentage of the population.

8.5% of the population has a disability that affects computer use

...does not include those with cognitive/learning disabilities, color blindness, etc.

Google is blind

...and deaf

...and can't use a mouse

Assistive Technology

“Assistive technology promotes greater independence by enabling people to perform tasks that they were formerly unable to accomplish, or had great difficulty accomplishing.”

[Wikipedia](#)

Do you use a form of
assistive technology?



True, False, or I don't know?

My web content is currently accessible.

WCAG 2

- Principles based
 - Perceivable
 - Operable
 - Understandable
 - Robust
- WCAG 2.0 finalized in 2008
- WCAG 2.1 finalized June 2018

Normative

- “Required for conformance”
- Principles (POUR) > Guidelines > Success Criteria
- Success Criteria are assigned levels
 - A, AA, or AAA



Non-normative



- “For information purposes and not required for conformance”
- Supporting materials are non-normative
- Understanding...
- How to Meet...
 - Sufficient Techniques, Advisory Techniques, and Failures

Principle 1 – Perceivable

Information and user interface components must be presentable to users in ways they can perceive.

Guideline 1.1 – Text Alternatives

Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

[➤ Show techniques and failures for 1.1](#)

1.1.1 Non-text Content — Level A

All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below. [➤ Show full description](#)

[i Understanding 1.1.1](#)

[➤ Show techniques and failures for 1.1.1](#)

[↶ SHARE](#) | [↑ BACK TO TOP](#)

Guideline 1.2 – Time-based Media

Provide alternatives for time-based media.

1.2.1 Audio-only and Video-only (Prerecorded) — Level A

For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such: [➤ Show full description](#)

[i Understanding 1.2.1](#)

Principle 1: Perceivable

Web content is made available to the senses - sight, hearing, and/or touch

Guideline 1.1 Text Alternatives

Provide text alternatives for any non-text content

Success Criteria	Recommendations
1.1.1 Non-text Content (Level A)	<ul style="list-style-type: none"> <input type="checkbox"/> All images, form image buttons, and image map hot spots have appropriate, equivalent alternative text. <input type="checkbox"/> Images that do not convey content, are decorative, or contain content that is already conveyed in text are given null alt text (alt="") or implemented as CSS backgrounds. All linked images have descriptive alternative text. <input type="checkbox"/> Equivalent alternatives to complex images are provided in context or on a separate linked page. <input type="checkbox"/> Form buttons have a descriptive value. <input type="checkbox"/> Form inputs have associated text labels. <input type="checkbox"/> Embedded multimedia is identified via accessible text. <input type="checkbox"/> Frames and iframes are appropriately titled.

Guideline 1.2 Time-based Media

Provide alternatives for time-based media

NOTE: If the audio or video is designated as an alternative to web content (e.g., an audio or sign language version of a web page, for example), then the web content itself serves as the alternative.

Success Criteria	Recommendations
1.2.1 Prerecorded Audio-only and Video-only (Level A)	<ul style="list-style-type: none"> <input type="checkbox"/> A descriptive text transcript that includes relevant auditory content is provided for non-live audio-only (audio podcasts, MP3 files, etc.). <input type="checkbox"/> A descriptive text transcript or audio description is provided for non-live video-only (e.g., video that has no audio track), unless the video is decorative.
1.2.2 Captions (Prerecorded) (Level A)	<ul style="list-style-type: none"> <input type="checkbox"/> Synchronized captions are provided for non-live video (YouTube videos, etc.).

Your site can be compliant,
yet inaccessible

Your site can be technically accessible,
yet functionally inaccessible

Accessibility > Compliance

Section 508

- Applies to federal government.
- Agencies may require compliance for recipients of federal funds.
 - Section 504
- Updated January 2018 to incorporate WCAG 2.0 A/AA
- VPAT 2 – Voluntary Product Accessibility Template

Americans with Disabilities Act

- Pre-dates the web
- 3 Titles – Employment, State and local governments, Public and commercial facilities
- Does not define technical standards for web accessibility
- Lawsuits, complaints, and DOJ settlements require WCAG 2.0 A/AA

ADA Compliant?



[Introduction to Web Accessibility](#)



[WebAIM Training](#)



We have web accessibility in mind

Our mission is to empower organizations to make their web content accessible to people with disabilities.

[Accessibility Training](#)



Whether here in Utah or on-site at your organization, WebAIM can provide comprehensive training to fit your needs.

[Accessible Site Certification](#)



As a respected third party accessibility expert, WebAIM can evaluate and certify your site to established web accessibility guidelines.

Community

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[Accessible Site Certification](#)

As a respected third party accessibility expert, WebAIM can evaluate and certify your site to established web accessibility guidelines.

[Technical Assistance](#)

Need assistance implementing accessibility? WebAIM's expert staff can provide the assistance you need.

[Evaluation and Reporting](#)

We can provide reports to help you know how accessible your site is and how to make it better.

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WebAIM - Web Accessibility In Mind

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Focus on Content & Structure

- Headings
- Slide layouts (PowerPoint)
- Lists

Screen reader demo

Alternative Text

Alternative Text

Should...

- Be accurate and equivalent.
- Be succinct.
- NOT be redundant.
- NOT use the phrases "image of ..." or "graphic of ..." to describe the image.

What is **equivalent** alternative text?

CONTENT and **FUNCTION**

VERY RARELY Description

If you couldn't use a picture, what text
would you put in its place?

WebAIM

web accessibility in mind



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web accessibility in mind





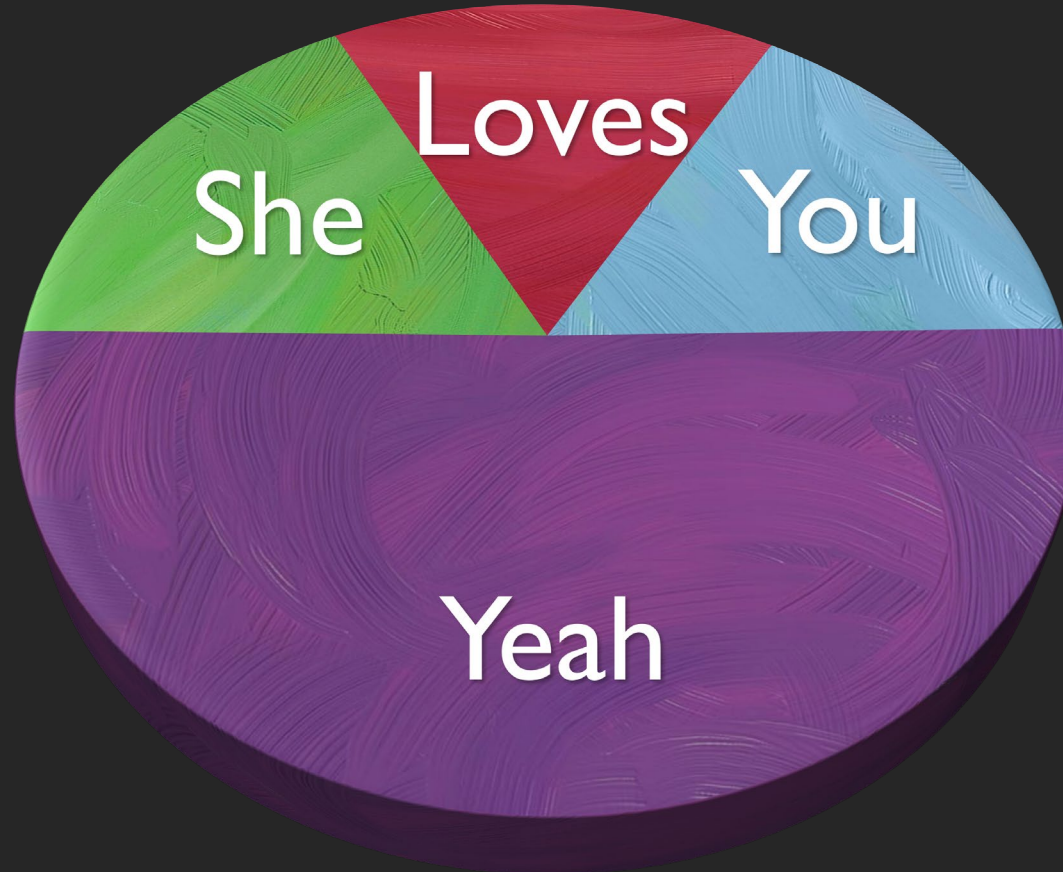
What if it's a link?





alt="students studying
under a tree"???

Complex Images



Contents of a Beatles Song

Complex Images

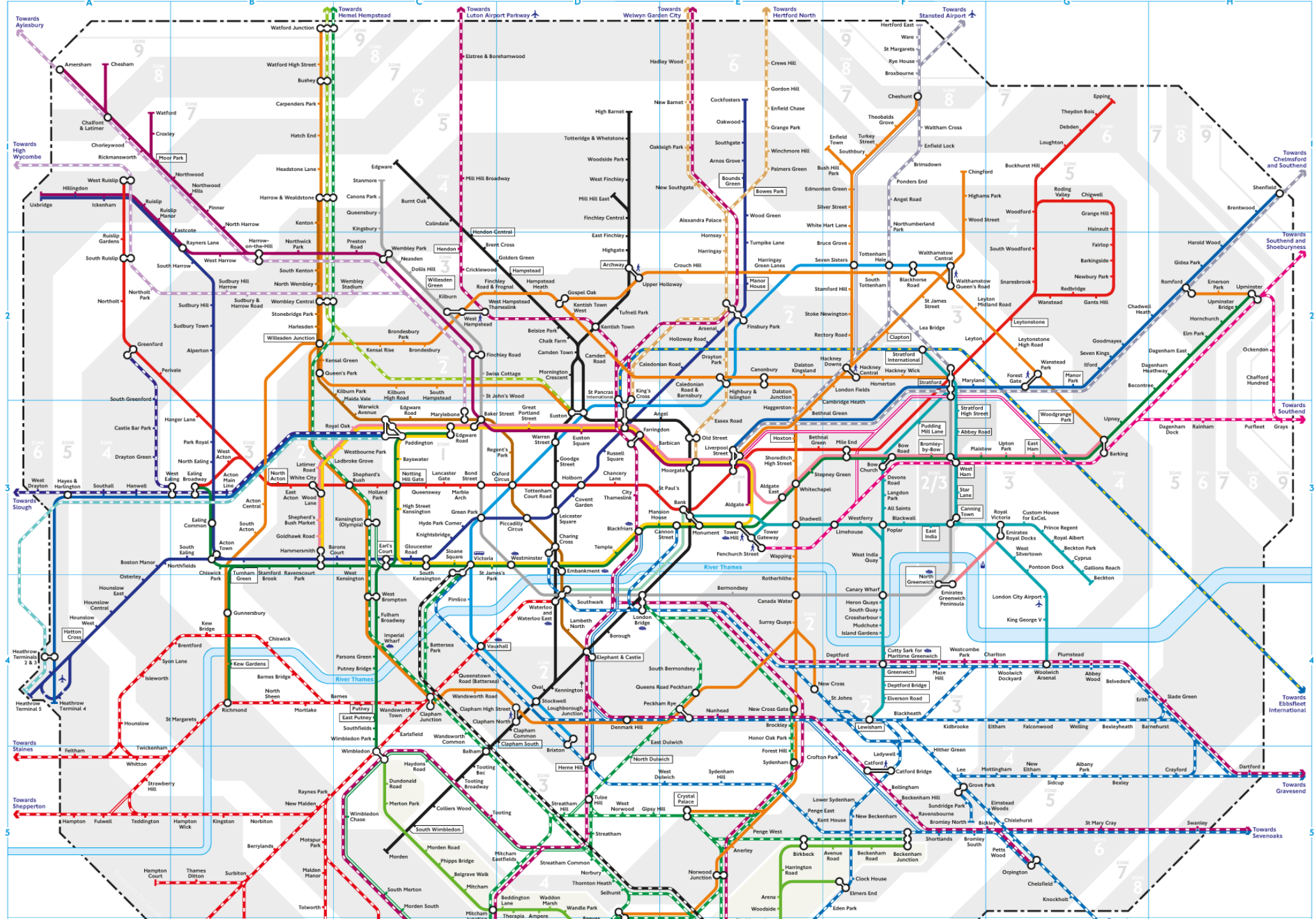
- Provide the alternative in context **OR**
- Provide a link to page that contains the longer description
- The main image should still have descriptive alternative text

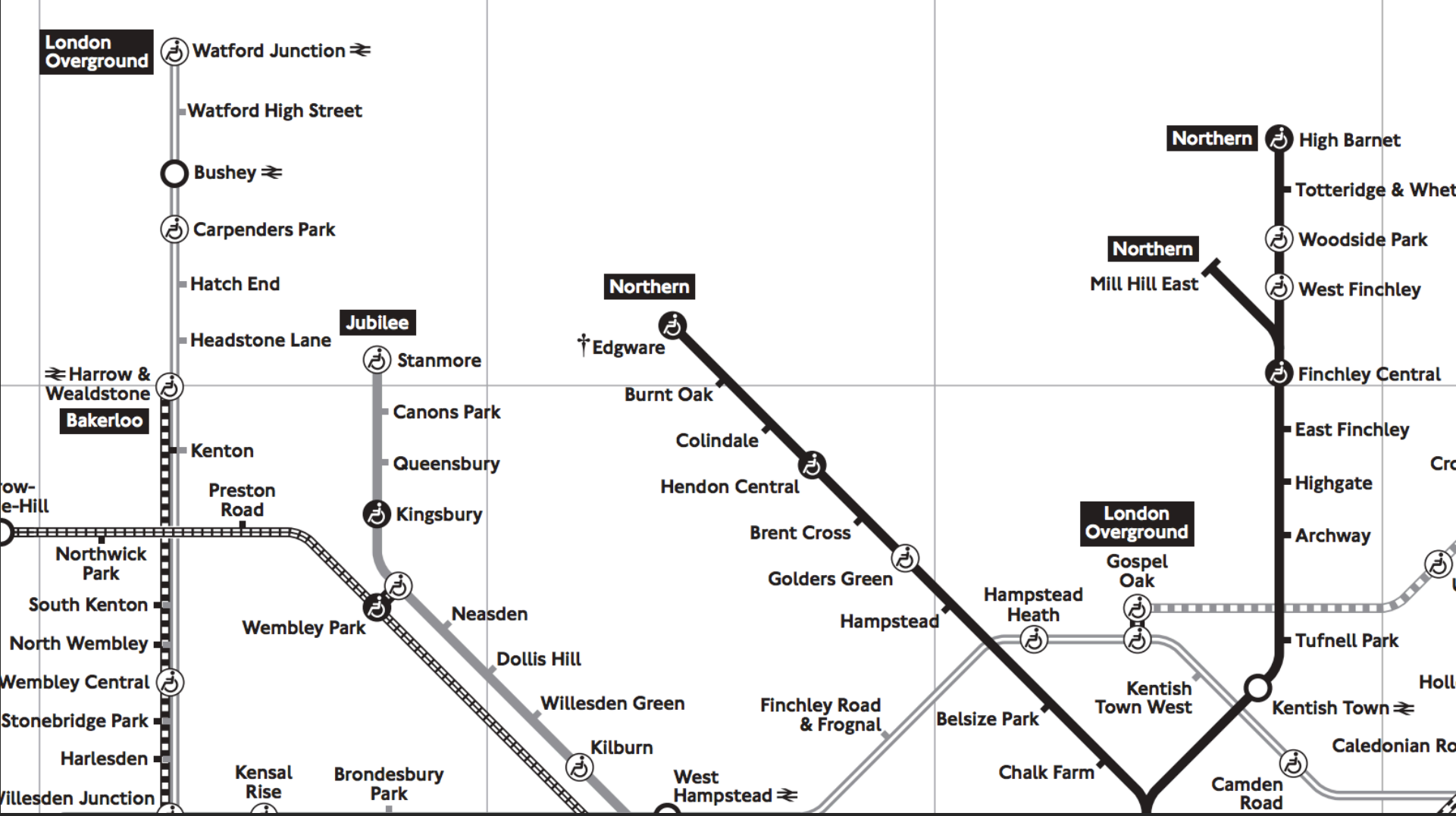
London's Rail & Tube services


Key to lines and symbols

- Bakerloo
 - Central
 - Circle
 - District
 - Hammersmith & City
 - Jubilee
 - Metropolitan
 - Northern
 - Piccadilly
 - Victoria
 - Waterloo & City
 - DLR
 - London Overground
 - London Trams
 - TFL Rail
 - Emirates Air Line cable car
-
- - - Chiltern Railways limited service
 - - - Gatwick Express limited service
 - - - Great Northern
 - - - Great Western Railway
 - - - Greater Anglia peak hours only
 - - - Heathrow Express peak hours or limited service
 - - - Southern peak hours only
 - - - Southeastern peak hours only
 - - - Southeastern high speed peak hours only
 - - - South Western Railway peak hours only
 - - - Thameslink peak hours only
 - - - West Midlands Trains


- London Trams fare zone
- Station in both fare zones
- Interchange stations
- Street level transfer between stations
- Airport
- Riverboat services
- Victoria Coach Station





 [Plan a journey](#)

Plan a journey

Heathrow Airport Terminal 4 

Paddington 

Leaving: now [change time](#) >

[Hide preferences](#) <

[Plan my journey](#)

[My Journeys](#) [Recents](#)

Heathrow Airport Terminal 4 to Piccadilly Circus, London, UK 

 [Add favourites](#) [Turn off / clear](#)






Public transport




 Cycling

 Walking

Travel by




[select all](#) | [deselect all](#)

-  Bus
-  National Rail
-  London Overground
-  River Bus
-  Emirates Air Line

-  Tube
-  DLR
-  TfL Rail
-  Tram
-  Coach

Show me

Access options

-  The fastest routes
-  Routes with fewest changes
-  Routes with least walking

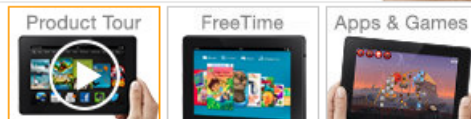
- No accessibility requirement
- Use escalators, not stairs
- Use stairs, not escalators
- Step-free to platform only
- Full step-free access

Kindle Fire HD

Our most affordable Kindle Fire, now in HD




Product Tour



[See 1 customer image](#)
[Share your own customer images](#)

learn more 17 of 17

★★★★★ (9,193 customer reviews)

\$139.00  Exclusive digital benefits with Amazon Prime

Storage Size: 8 GB

8 GB

16 GB

Offer Type: **With Special Offers**

With Special Offers

Without Special Offers

Special offers and sponsored screensavers display on the Kindle Fire lock screen. [Learn more](#)

In Stock.


Ships from and sold by **Amazon Digital Services**.
Important information about using outside the U.S.

Want it tomorrow, Feb. 19? Order within **7 hrs 50 mins** and choose **One-Day Shipping** at checkout. [Details](#)

We want you to know...

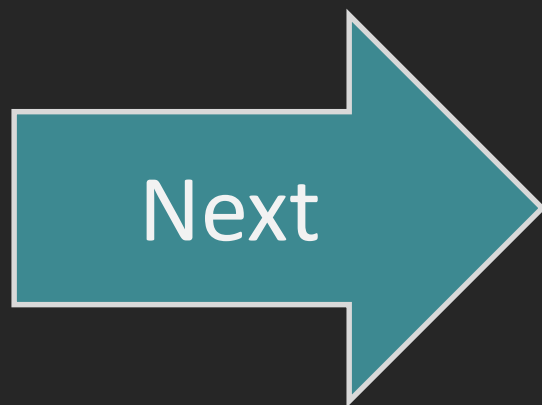
[Learn more](#) about design decisions and feature changes to help make an informed purchase

Our most affordable Kindle Fire—now with a stunning HD display, faster processor, and longer battery life

- Experience movies, TV, and games, and more on a stunning HD display (216 ppi / 1280x800)
- Fast 1.5GHz dual-core processor—apps launch quickly, games and videos play smoothly
- Create profiles and set time limits for children with Kindle FreeTime. Easy-to-use parental controls let everyone enjoy, worry-free
- Ultra-fast web browsing over built-in Wi-Fi, plus updated e-mail and calendar support for Gmail, Outlook, and more
- Instant access to over 100,000 apps and games in the Amazon Appstore, including a new paid app for free every day
-  **Prime** In addition to Free Two-Day Shipping, Prime members can stream tens of thousands of Prime Instant Video titles at no additional cost, over half of which can be downloaded to the latest generation of Kindle Fire tablets. [Learn more](#)

Descriptive link text

- [Click here](#)
- [Click here](#) to log in
- [Click here to log in](#)
- [Log in](#)



Tables

Layout tables

39%

Average Score

67%

High Score

0%

Low Score

3.42

Standard
Deviation

02.59

Average Time

Layout tables

39%	67%	0%	3.42	02.59
Average Score	High Score	Low Score	Standard Deviation	Average Time

Layout tables

39% Average Score	67% High Score	0% Low Score	3.42 Standard Deviation	02.59 Average Time
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Data tables

Class Schedule

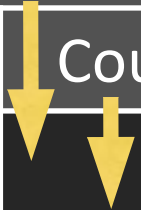
Class Name	Course Number	Location
Advanced Website Development	BIS 5650	B105
Database Management	BIS 3330	B220

Data tables

Class Schedule

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

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

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

Low Vision

Shop by Department ▾

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Kindle Fire

Powerhouse tablets
Built for work and play



Fire HD
\$139



Fire HDX
\$229



Fire HDX 8.9"
\$379



Fire HDX 10.1"
\$269

[Compare Kindles ▾](#)

kindle fire HD

Our most affordable Kindle Fire, now in HD



Kindle Fire 7" Tablet, Now in HD

7" HD Display, Wi-Fi, 8GB or 16GB

★★★★☆ (9,181 customer reviews)

\$139.00 FREE Shipping [Details](#)

Storage Size: **8 GB**

8 GB

16 GB

Offer Type: **With Special Offers**

[With Special Offers](#)

[Without Special Offers](#)

Special offers and sponsored screens on the Kindle Fire lock screen. [Learn more](#)

Shop by **Department** ▾

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Kindle Store ▾

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Kindle Fire

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kindle fire HD

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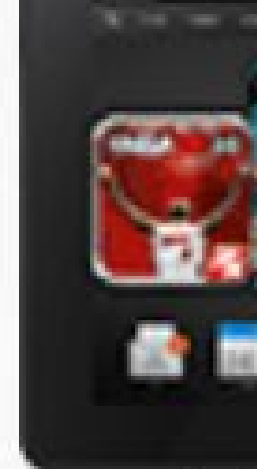




Fire HD
\$139



Fire HDX
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Fi

ay

Kindle Fire, now in HD

Kindle Fire 7" Tablet, Now i

7" HD Display, Wi-Fi, 8GB or 16GB

★★★★☆ (9,181 customer reviews)

\$139.99

Vitally Important Text

VS

Vitally Important Text

Inverted and High Contrast

The screenshot displays the Amazon Kindle Store interface. At the top, the Amazon logo is accompanied by a 'Try Prime' badge and navigation links for 'Your Amazon.com', 'Today's Deals', 'Gift Cards', 'Sell', and 'Help'. Below this is a search bar with 'Kindle Store' entered and a 'Go' button. A secondary navigation bar includes links for 'Buy a Kindle', 'Kindle eBooks', 'Advanced Search', 'Daily Deals', 'Free Reading Apps', 'Kindle Singles', and 'News'. The main content area features a section titled 'The World's Best-Selling E-readers' with three product cards: 'Kindle' at \$69, 'Kindle Paperwhite' at \$119, and 'Kindle Paperwhite 3G' at \$189. Below this is a 'Compare Kindles' link. The lower section is a featured product for the 'Kindle Fire 7" Tablet, Now in HD', highlighting its '7" HD Display, Wi-Fi, 8GB or 16GB' specifications and a 4.5-star rating from 9,181 reviews. The price is prominently displayed as '\$139.00' with 'FREE Shipping' and a 'Details' link. Storage options for '8 GB' and '16 GB' are shown in buttons, with '8 GB' selected. The offer type is set to 'With Special Offers', and a note indicates 'Special offers and on the Kindle Fire'.

amazon
Try Prime
Your Amazon.com Today's Deals Gift Cards Sell Help

Shop by Department Search Kindle Store Go

Buy a Kindle Kindle eBooks Advanced Search Daily Deals Free Reading Apps Kindle Singles News

The World's Best-Selling E-readers

Kindle \$69 Kindle Paperwhite \$119 Kindle Paperwhite 3G \$189

Compare Kindles

kindle fire HD
Our most affordable Kindle Fire, now in HD

Kindle Fire 7" Tablet, Now in HD
7" HD Display, Wi-Fi, 8GB or 16GB
★★★★☆ (9,181 customer reviews)

\$139.00 FREE Shipping Details

Storage Size: 8 GB
8 GB 16 GB

Offer Type: With Special Offers
With Special Without Special Special offers and on the Kindle Fire

WCAG Contrast Formula

$$(L1 + 0.05) / (L2 + 0.05)$$

where

$$L = 0.2126 * R + 0.7152 * G + 0.0722 * B$$

where

R, G, and B =

$$R_{sRGB} \leq 0.03928 \text{ then } R = R_{sRGB} / 12.92$$

$$\text{else } R = ((R_{sRGB} + 0.055) / 1.055) ^ 2.4$$

where

$$R_{sRGB} \leq R_{8bit} / 255$$

21:1

21:1

Level AA Contrast Examples

4.5:1

Gray (#767676) on White

Purple (#CC21CC) on White

Red (#F30000) on Yellow (#FFFF00)

3:1 – “Large” text

≥18pt (24px)

BOLD: ≥14pt (18.67px)

WebAIM Contrast Checker

webaim.org/resources/contrastchecker/

“Images of text”

50 most played
songs by genre

music



We have the same contrast ratio

We have the same contrast ratio

We have the same contrast ratio

We have the same contrast ratio

Exceptions

“Incidental”



“Logotypes”

WebAIM
web accessibility in mind

WCAG 2.1: Non-text Contrast

- Level AA
- 3:1 contrast of:
 - User Interface Components (less common in documents)
 - Graphical Objects

“Graphical Objects”



“Required to understand”



Twitter

“Against adjacent color(s)”



Exception – “Essential”

The image shows a screenshot of the German Wikipedia homepage. A rainbow-colored heatmap is overlaid on the page, highlighting several key areas: the main navigation bar at the top, the 'Willkommen bei Wikipedia' (Welcome to Wikipedia) banner, the 'Artikel des Tages' (Article of the Day) section, the 'Was geschah am 4. Juli?' (What happened on July 4th?) section, and the 'Schwesterprojekte' (Sister Projects) section at the bottom. The heatmap is most intense in the center and top areas, indicating high user engagement or importance.

Willkommen bei Wikipedia
Wikipedia ist ein Projekt zum Aufbau einer Enzyklopädie aus freien Inhalten, zu denen du sehr gern beitragen kannst. Seit Mai 2001 sind 2.076.952 Artikel in deutscher Sprache entstanden.

Artikel des Tages
Puma war eine brasilianische Automarke. Die Fahrzeuge entstanden ursprünglich auf DKW-Vemag-Basis, wechselten nach dem Niedergang dieser Marke zu Technik von Volkswagen in Brasilien und wurden in ihrer Endphase aus Bauteilen von General Motors hergestellt. Es gab rund 20 verschiedene Modelle, die in ihrer Grundkonstruktion alle auf einem zentralen Pulltrahlfahrgestell mit GFK-Karosserie basierten. Im erfolgreichsten Produktionsjahr 1973 entstanden 3595 Pumas (GM-basiert). Insgesamt wurden offiziell 21.733 Fahrzeuge gebaut. Ein andere Quelle nennt etwa 22.000 Fahrzeuge. 1926 erwarb Ford die Rechte an der Marke Puma und nutzte den Namen von 1997 bis 2002 für den Ford Puma. In den 1960er- und 1980er-Jahren versuchte Brasilien immer, den Anschluss an die westlichen Industrienationen zu gewinnen. Sichtbarer Ausdruck dafür war, neben der Erhebung der damals hochmodernen Hauptstadt Brasilia, der Aufbau einer nationalen Automobilindustrie. Um dieses Ziel zu erreichen, wurden Kooperationen mit großen Automobilherstellern eingegangen, unter anderem mit Volkswagen. Parallel dazu wurden zur Förderung heimischer Produktionsstätten hohe Importzölle auf fertig produzierte Automobile erhoben. – Zum Artikel ...

Was geschah am 4. Juli?

- 1187 – In der Schlacht bei den Hörnern von Hattin unterliegt das Heer der Kreuzfahrerstaaten gegen die Truppen von Saladin.
- 1872 – Im Deutschen Kaiserreich werden Niederlassungen der Jesuiten durch das Jesuitengesetz verboten.
- 1902 – Vivekananda, hinduistischer Mönch und Gelehrter, stirbt.
- 1927 – Die italienische Filmschauspielerin Gina Lollobrigida (eas. Fanfan, der Husar, Trapez, Der Glockner von Notre Dame) wird geboren.
- 1997 – Die NASA-Sonde Pathfinder landet auf dem Mars.

Schwesterprojekte

- Meta-Wiki – Koordination
- Commons – Medien
- Wiktionary – Wörterbuch
- Wikibooks – Lehrbücher
- Wikiquote – Zitate
- Wikiversity – Lernplattform
- Wikisource – Quellen
- Wikinews – Nachrichten
- Wikidata – Wissensdatenbank
- Wikivoyage – Reiseführer

Color Blindness



An Example

The green mushrooms listed here are okay to eat. The red mushrooms will kill you.

- Amanita
- Chanterelle
- Porcini
- Shiitake
- Tylopilus

An Example

The green mushrooms listed here are okay to eat. The red mushrooms will kill you.

- Amanita
- Chanterelle
- Porcini
- Shiitake
- Tylopilus

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

Auditory Disabilities



1. Provide captions for video & live audio.
2. Provide text transcripts for all audio content.

Transcription Methods

- Typing
 - Accurate, but very slow
- Stenographer or “Shadow Speaker”
 - Accurate and fast, but expensive
- Automated captioning
 - Free, but may require extensive review/repair





Is officially tomatoes it's prisons rations?
He look for it.

Search for captioned videos

The screenshot shows the YouTube search interface. The search bar contains the text "Center for Health Literacy". To the right of the search bar is a search icon and an "Upload" button. Below the search bar, a "Filters" button is circled in red. To the right of the filters, it says "About 12,200 results". Below the filters, there is a table with columns: "Upload Date", "Result Type", "Duration", "Features", and "Sort by". The "Features" column has "CC (closed caption)" circled in red. The "Sort by" column has "Relevance", "Upload date", "View count", and "Rating".

YouTube

Center for Health Literacy

Upload

Filters

About 12,200 results

Upload Date	Result Type	Duration	Features	Sort by
Last hour	Video	Short (~4 minutes)	HD (high definition)	Relevance
Today	Channel	Long (20~ minutes)	CC (closed caption)	Upload date
This week	Playlist		Creative commons	View count
This month	Movie		3D	Rating
This year	Show		Live	
			Purchased	

Audio Description

Typically a narrator that describes visual content.
Sometimes called “Descriptive Video Service” (DVS).

Avoid expensive audio descriptions by ensuring
important visual content is presented audibly.



What are additional benefits of captions and transcripts?

Cognitive/Learning Disabilities

Most of these principles apply

- Headings
- Links
- Video Captions
- Contrast
- Alternative text (possibly)

Cognitive/Learning Disabilities

- Small text negatively impacts readability
 - WCAG has no text size guidelines
- Avoid long line lengths
 - Consider line height/spacing
- Be consistent

Avoid Full Justification

em ipsum dolor sit amet, consectetur
piscing elit. Pellentesque viverra
n nunc. Nam sed nisl nec elit susce
llamcorper. In leo ante, venenati
utpat ut, imperdiet auctor, enim. C
avida. Suspendisse molestie sem
aesent a lacus vitae turpis conseq
mper. Integer porta. Donec sit am
aesent a eros. In hac habitasse pl
ctumst. Suspendisse fermentum.
em ipsum dolor sit amet, consect









Thank You!

<http://webaim.org>

- E-mail discussion list
- Monthly newsletter
- Tutorials, articles, and resources
- Blog



Document Accessibility Training



Jonathan Whiting and John Northup

WebAIM.org

Blindness

[skip to main content](#)

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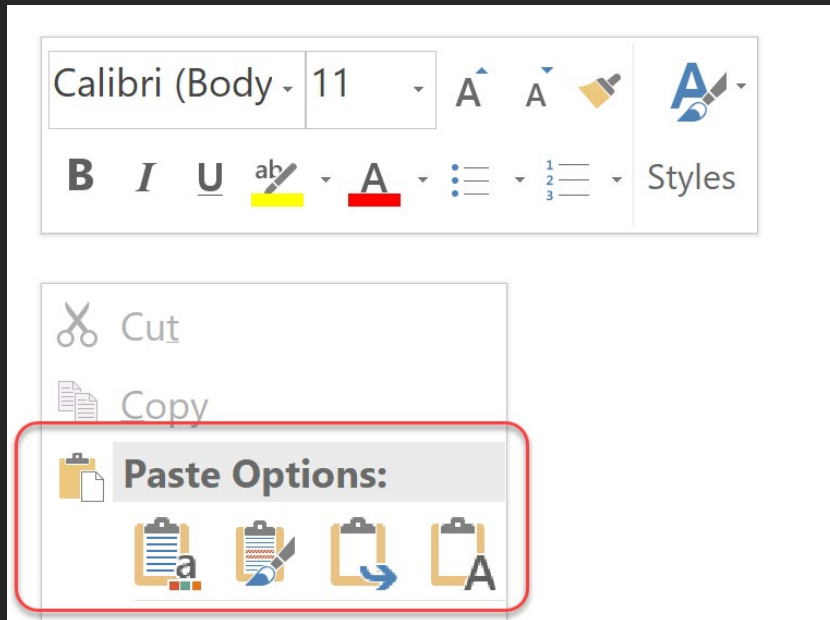
Accessibility Training

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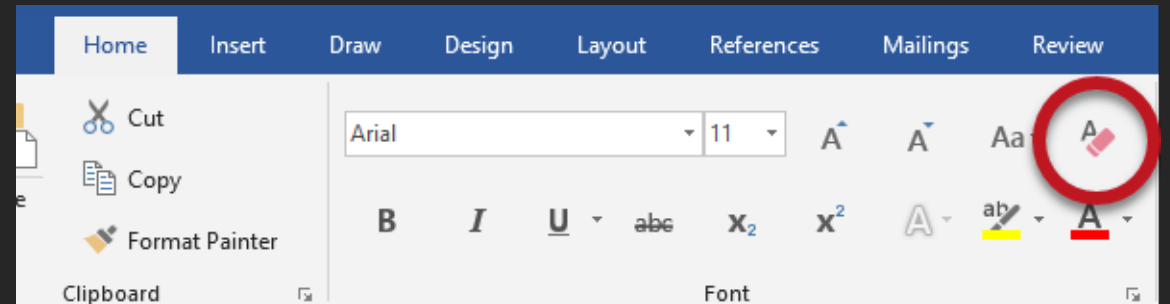
Focus on Content & Structure

Focus on Content & Structure

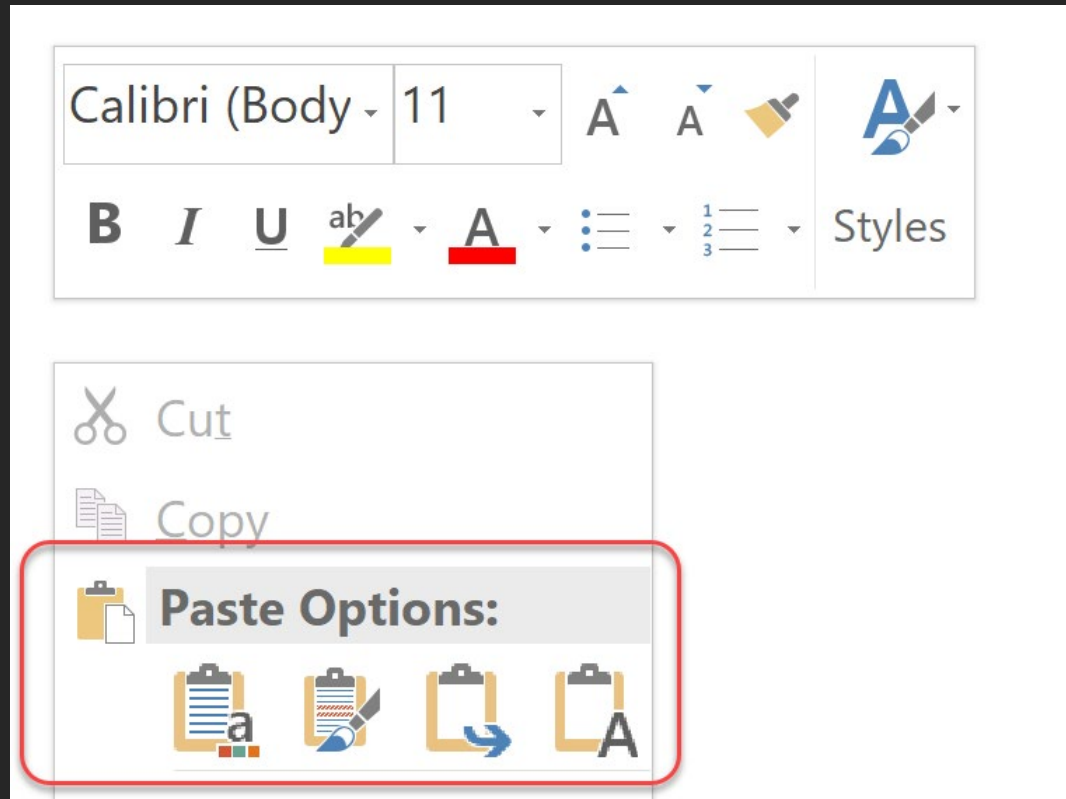
Paste > “Keep Text Only”



“Clear formatting”



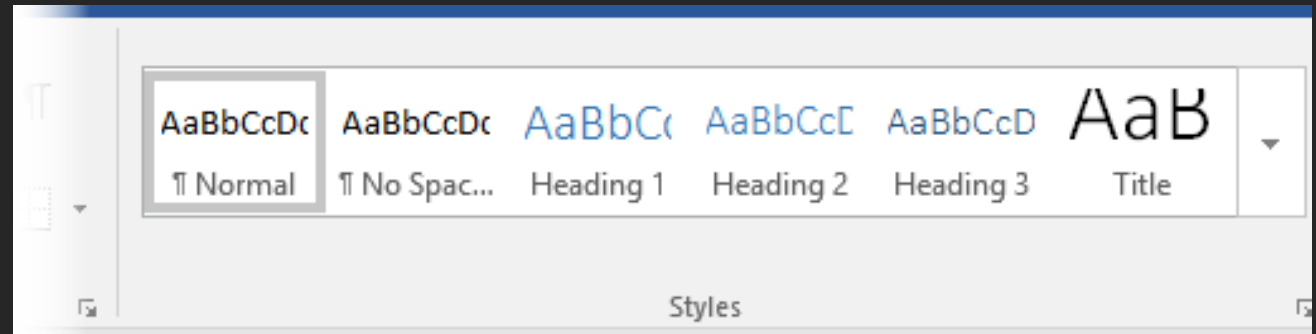
Paste Options Office



Use Headings

Headings in Word

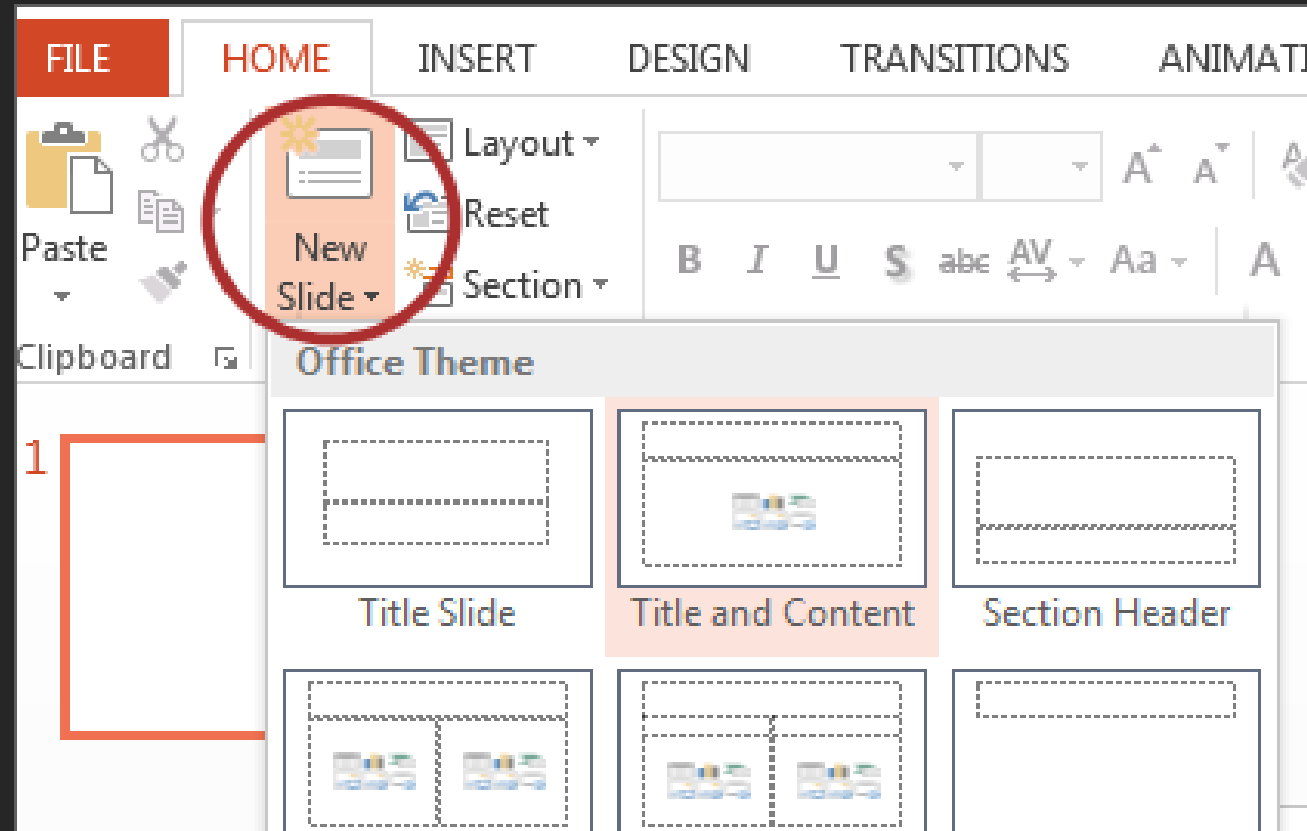
- Use “Styles” toolbar
- Proper heading structure
 - Usually one Heading 1
 - Don’t skip heading levels
- Ctrl + Alt + 1, 2, or 3
 - command + option on Mac



Where are the Headings in PowerPoint?

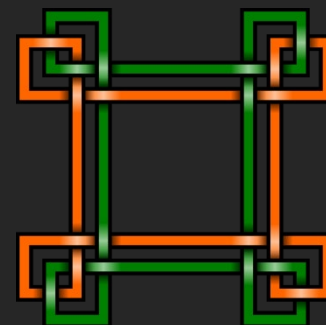


Slide “Layouts”

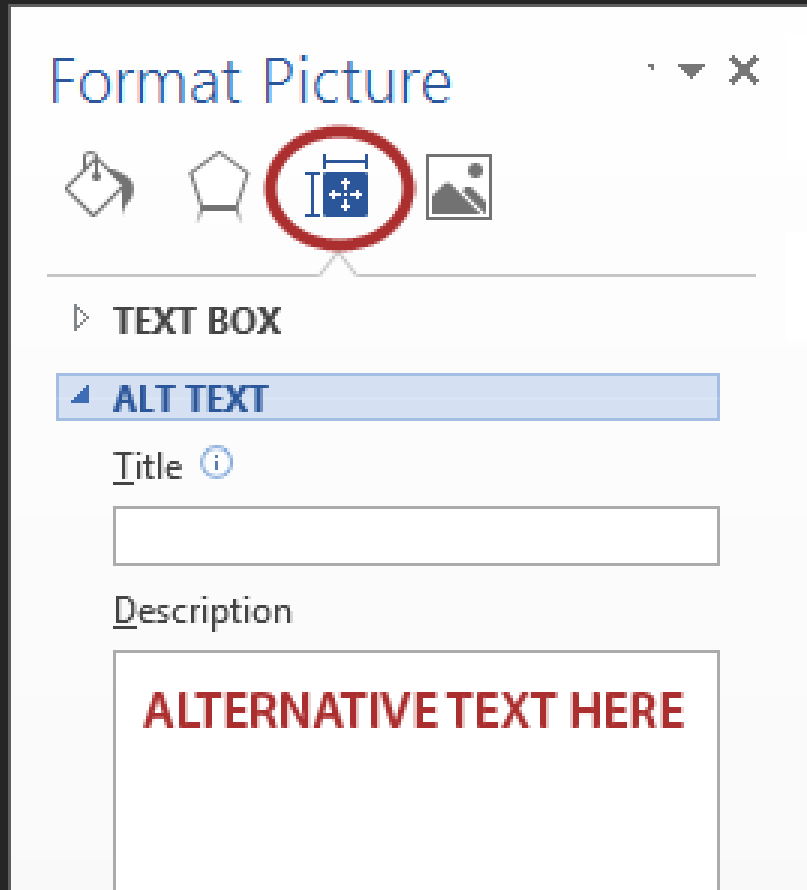


Decorative Images

- You can hide images from a screen reader in Word or PowerPoint, but only in Office 2019 or Office 365.
- A screen reader will usually read "graphic".
- They will be hidden in PDF. If you have Office 2016, you will need to hide in Acrobat.
- Avoid decorative images when possible.



Alternative Text in Office 2016



1. Right-click the image and choose **Format Picture**.
2. Select the **Size[Layout] & Properties** icon and choose **Alt Text**.
3. Enter appropriate alt text in the **Description** field (not Title).

Alternative Text in Office 365/2019

Alt Text ▼ ×

How would you describe this object and its context to someone who is blind?
(1-2 sentences recommended)

ALTERNATIVE TEXT HERE

~~Generate a description for me~~

Mark as decorative [i](#)

1. Right-click the image and choose **Edit Alt Text**
2. Enter appropriate alt text in the field.
–Or check **Mark as decorative**

Windows: DO NOT choose “Generate a description for me”

Tables practice

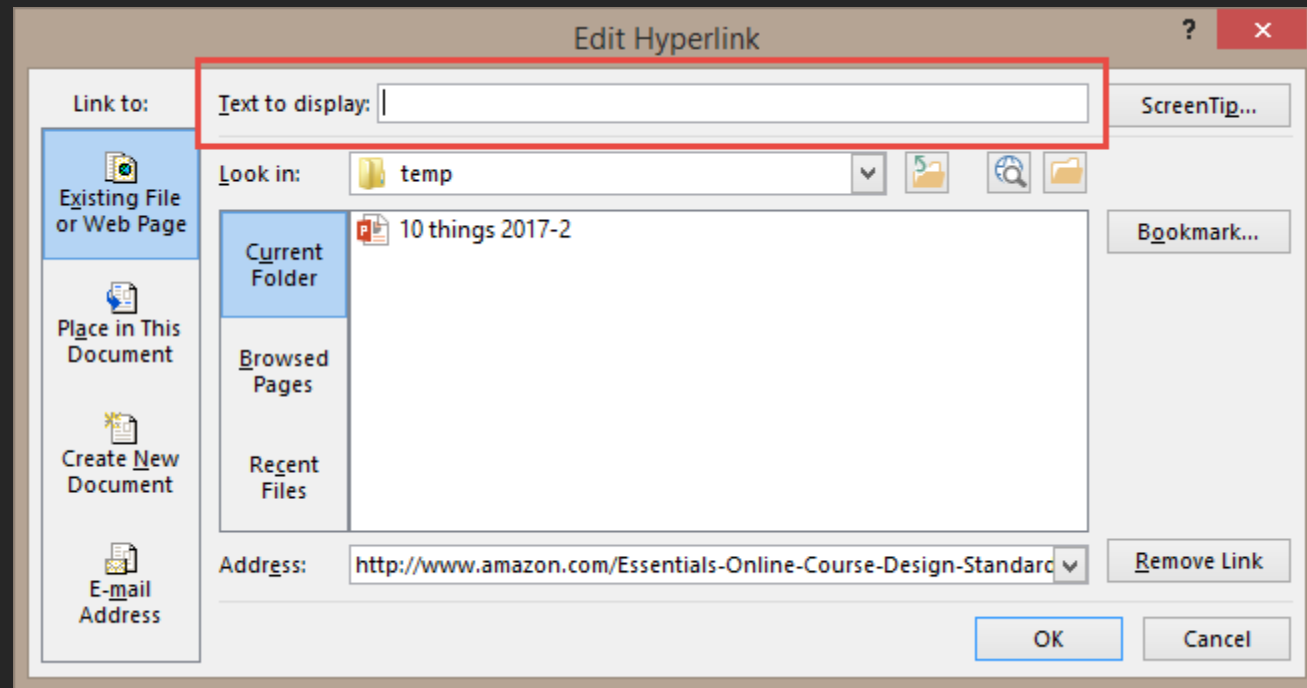
Class Schedule

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

Tables – other principles

- Use data table Styles only for data tables
- Avoid empty headers
- No need to add “Alt text” to tables

Editing Link Text



Right click > Edit Hyperlink (or Ctrl + K) > Text to display

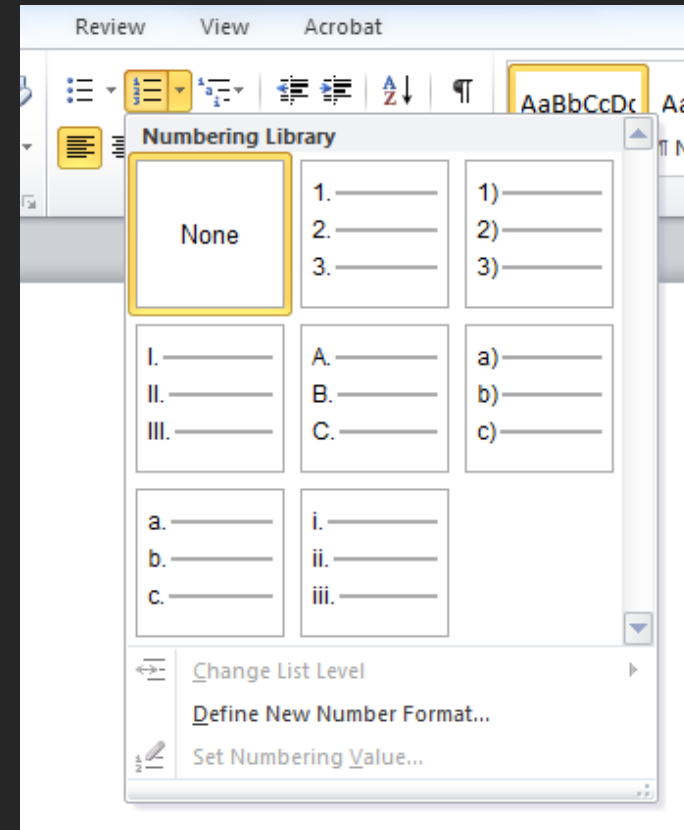
For more information on this topic, read Essentials of Online Course Design: A Standards-Based Guide-

[http://www.amazon.com/Essentials-Online-Course-Design-Standards-](http://www.amazon.com/Essentials-Online-Course-Design-Standards-Based/dp/0415873002/ref=sr_1_11?s=books&ie=UTF8&qid=1329661475&sr=1-11)

[Based/dp/0415873002/ref=sr_1_11?s=books&ie=UTF8&qid=1329661475&sr=1-11](http://www.amazon.com/Essentials-Online-Course-Design-Standards-Based/dp/0415873002/ref=sr_1_11?s=books&ie=UTF8&qid=1329661475&sr=1-11) -

Lists

- Use true lists rather than typing numbers or inserting bullet characters/icons
 - Word/PowerPoint may auto-create lists
- Ordered (numbered) or unordered (bulleted) lists
- Nest lists appropriately

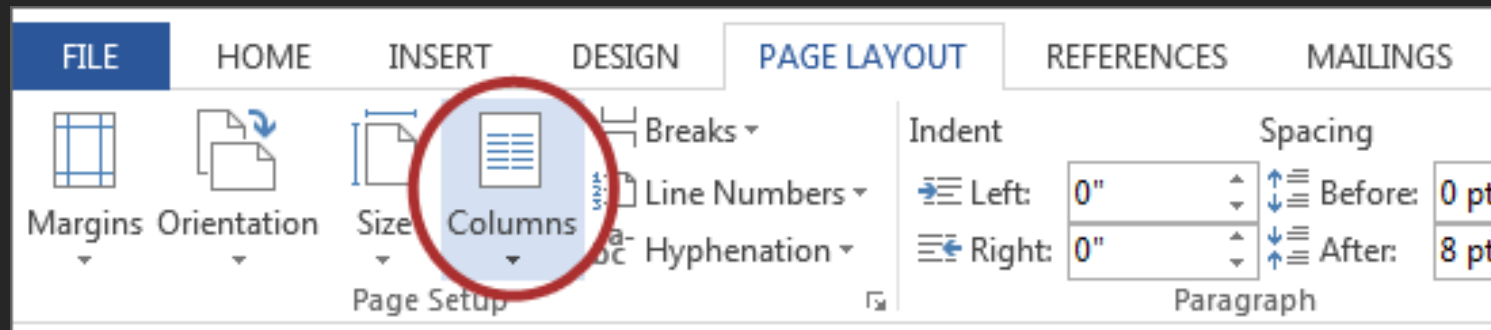


4 Steps to Create Lists in Office:

- 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

- Use true columns rather than the Tab key to define columns. This ensures proper reading order.
- Go to **Page Layout** on the Ribbon and select **Columns**.

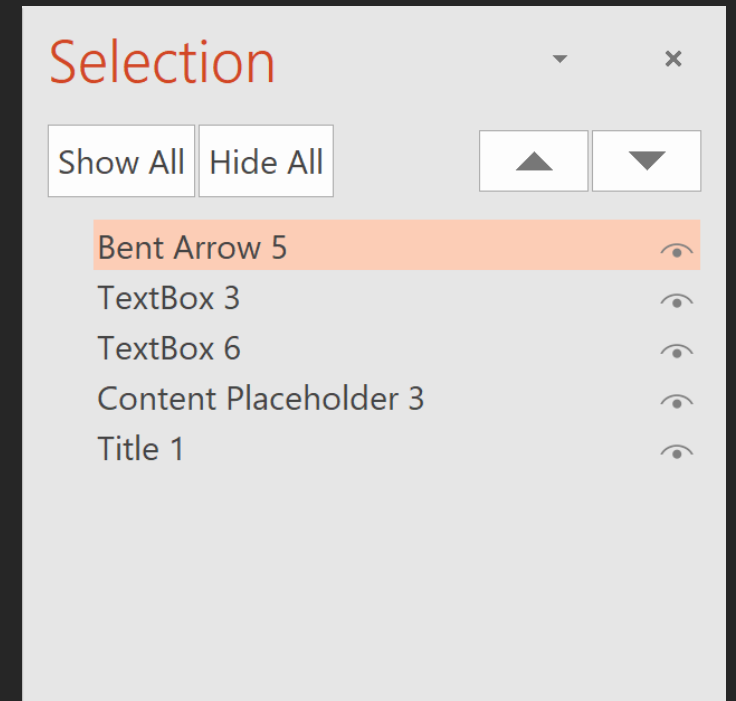
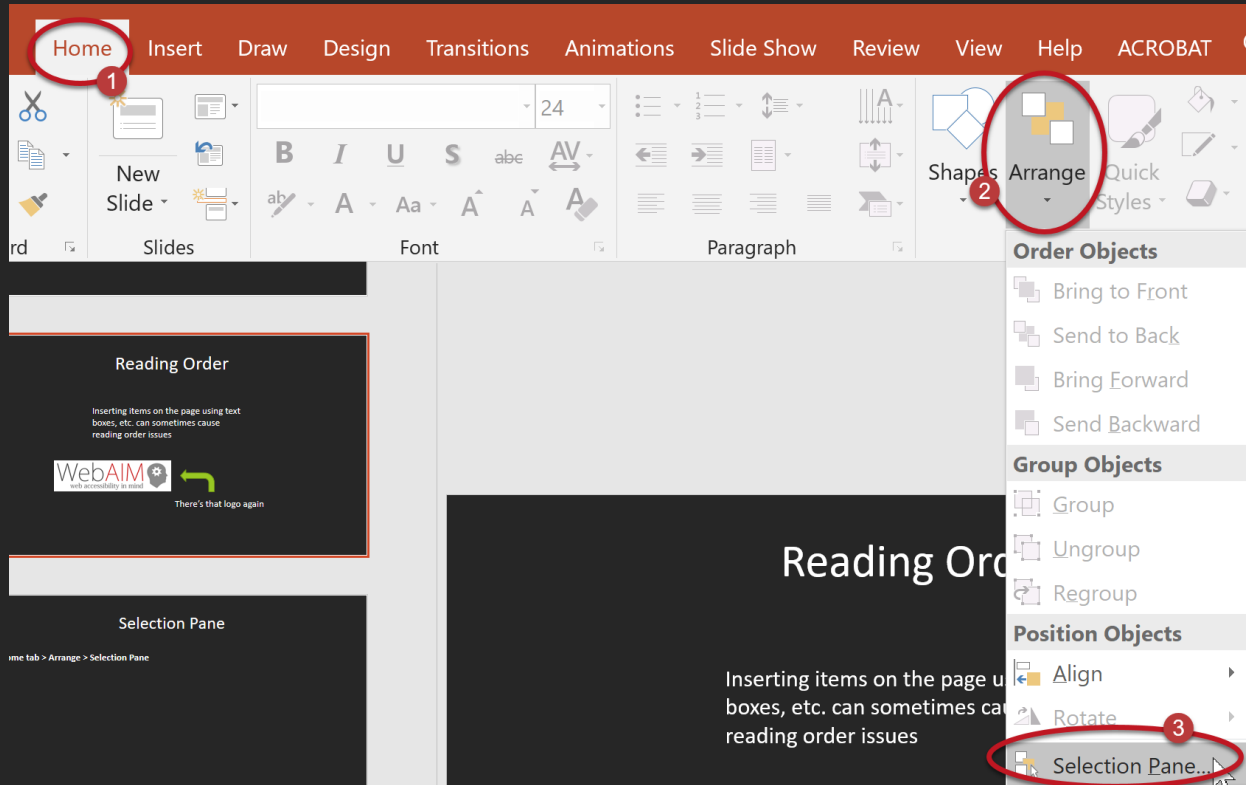


Reading Order

The object on a
slide's **bottom layer**
...is **read first** by a
screen reader.



Selection Pane



Reading Order Practice

Inserting items on the page using text boxes, etc. can sometimes cause reading order issues



There's that logo again

Give Documents Descriptive Titles

Document Title

Document1 - Word

Sign in

←

Info

New

Open

Save


Save As

Print

Share

Export


Info



Protect Document ▾

Protect Document

Control what types of changes people can make to this document.



Check for Issues ▾

Inspect Document

Before publishing this file, be aware that it contains:

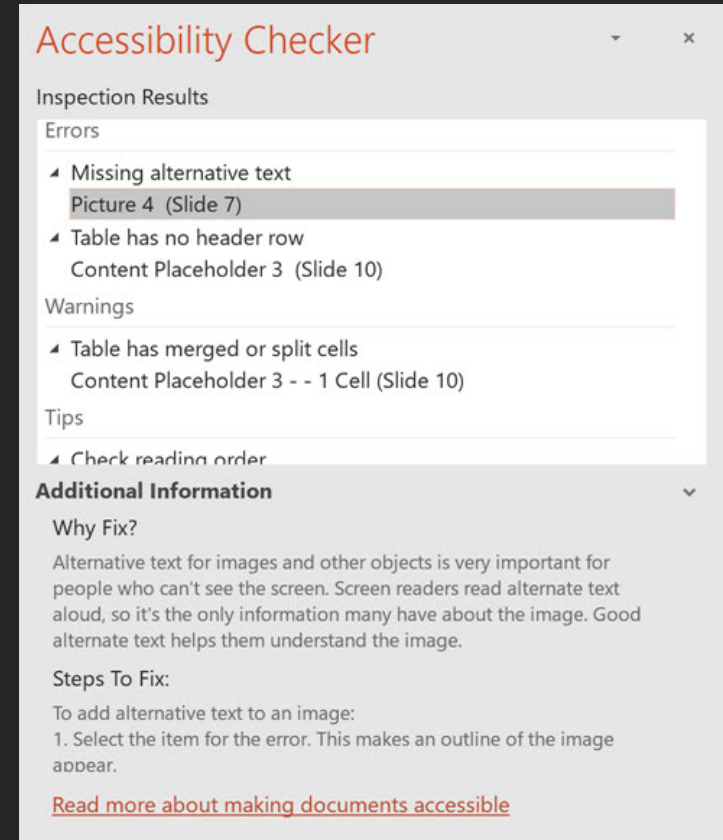
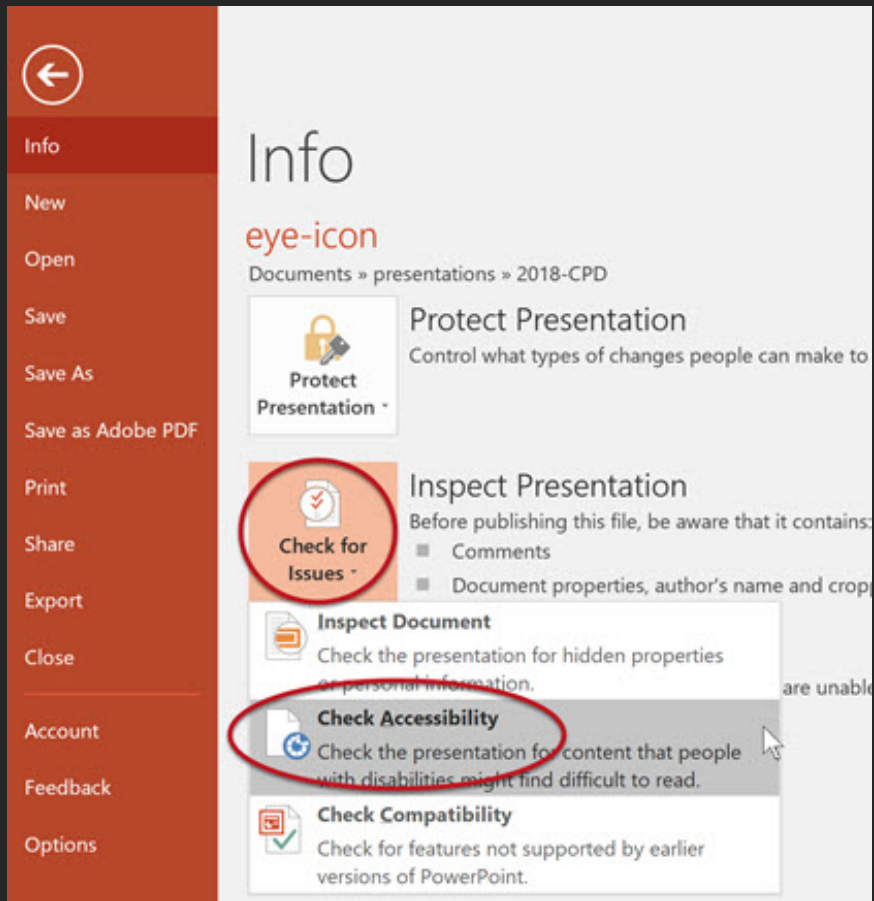
- Document properties and author's name

Properties ▾

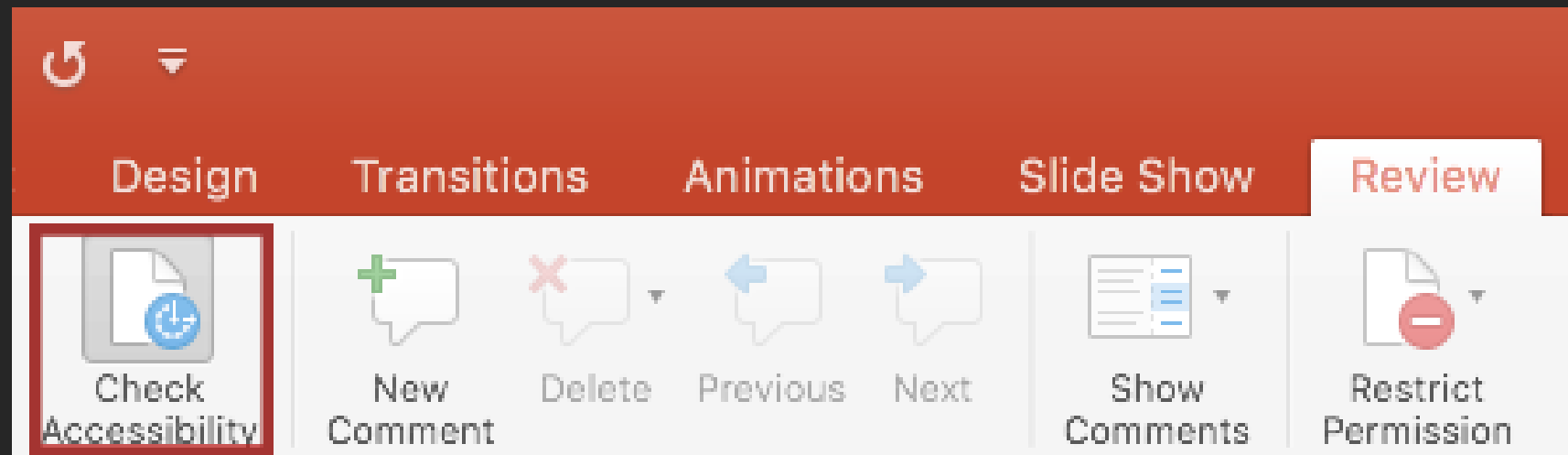
Size	Not saved yet
Pages	1
Words	0
Total Editing Time	0 Minutes
Title	<input type="text" value="Add a title"/>
Tags	Add a tag
Comments	Add comments

Check accessibility

Windows: File > Check for Issues > Check Accessibility



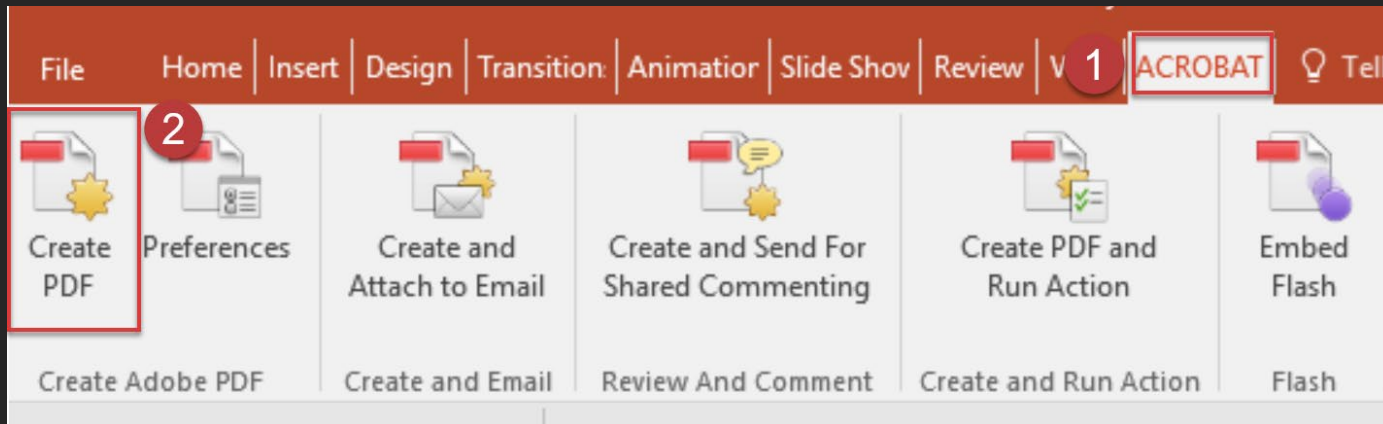
Mac: Review tab > Check Accessibility



PDF in a nutshell

- PDF is a file format
- Do as much as you can in the source document
- Need Acrobat Pro to make accessibility changes to PDF

Convert to PDF



- Windows: **Acrobat** tab > **Create PDF**
 - If not available, use “Save As”
- Mac: In Acrobat, **File** > **Create**
- Do **NOT** print

Start with the Source Document

- Headings
- Alternative text for images*
- Tables*
- Links
- Lists
- Columns
- Text size
- Contrast
- Color reliance
- Document title

*Decorative images, complex images, and tables may need cleanup in Acrobat.

WAVE

Quick Test

Test w

Images

Heading

Contra

Quick Reference: Testing Web Content for Accessibility



Test with WAVE

- WAVE (wave.webaim.org) is an accessibility evaluation tool that facilitates human evaluation by embedding inline accessibility feedback into your web content.
- Dynamic or protected content can be evaluated with the WAVE Chrome extension (wave.webaim.org/extension). Icons identify potential problems or features. Click an icon to highlight the corresponding element and get more information.
- Use the **Details** panel to review page issues. Click on an icon to find it in the page. Uncheck icons to hide them.
- **No Styles** view can be used to simplify the page view and to check reading order for screen readers.
- Click on the **Code** button at the bottom of the page to reveal a code inspector.

Images

- The image alt attribute value is displayed next to the image.
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- Look for images of text where the same presentation can be accomplished using true text.

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Contrast

- Select the **Contrast** view.
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- A standalone contrast checker is available at webaim.org/resources/contrastchecker/.

HTML5 and ARIA

- Identified in WAVE with light purple icons.
- Ensure HTML5 regions or ARIA landmarks are correct.
- Ensure HTML5 regions or ARIA Roles/States/Properties (presented in green).
- Ensure ARIA labels and descriptions are correct.

Forms

- Ensure forms controls have descriptive labels.
- Use the Code panel to ensure the <label> for and <input> id values match.
- If a label is not visible, check for a hidden label, aria-label, or title attribute.

Other common WAVE checks

- Page language is specified (e.g., <html lang="en">).
- If data tables are present, ensure table headers are present and have the correct scope.

Use a checklist

- WCAG 2.0: webaim.org/standards/wcag/checklist/.
- Section 508: webaim.org/standards/508/checklist/.
- 508 is dated and should be used with WCAG 2.0.

Check keyboard accessibility

- To toggle Mac keyboard accessibility press Control + F7.
- Then in Safari, select **Preferences > Advanced > Accessibility > Press Tab to highlight each item...**
- Navigate the page using only the keyboard.
 - **Tab**: Navigate to links and form controls.
 - **Shift + Tab**: Navigate backwards.
 - **Enter**: Activate links and buttons.
 - **Spacebar**: Activate checkboxes and buttons.
 - **Arrow keys**: Radio buttons, select/dropdown menus, sliders, tab panels, autocomplete, tree menus, etc.
- Is anything mouse-only (e.g., rollover menus)?
- Is a "skip navigation" link available? Activate the skip link and hit **Tab** again to ensure it functions correctly.
- Is the navigation order logical and intuitive?
- Is a visible keyboard focus indicator/outline present?
- Test dialogs that "pop" open. Can you navigate and close the dialog? Does focus return to a logical place?
- Modal dialogs maintain focus until dismissed.
 - Non-modal dialogs close when focus is lost.
 - **Esc** should also close all dialogs.

Test content scaling

- Enlarge the font in your web browser to ~150%. Is the page content readable and usable? Is horizontal scrolling minimized?
 - Safari: **View > Zoom Text Only**
 - Firefox: **View > Zoom > Zoom Text Only**
 - Internet Explorer: **View > Text size**
- Zoom the web page in your browser (enlarge fonts and images) to at least 200%. Is text in images readable?

Test with a screen reader

- Focus on navigation, forms, and dynamic content.
- WebAIM tutorials: webaim.org/articles/jaws/, webaim.org/articles/nvda/, and webaim.org/articles/voiceover/.
- Are ARIA roles/states/properties necessary, and do they convey correct information?
- If there are forms, submit empty to test error feedback.
- Are all dynamic changes and updates accessible?

Scan for other issues

- Check media for captions and transcripts.
- Ensure the page <title> is unique and descriptive.
- Look for links with ambiguous link text like "click here."
- Make sure information does not depend on color, audio, shape, size, or location.
- Ensure that animating or updating content or media can be paused and stopped.
- Look for strobing content/video that could cause seizures.

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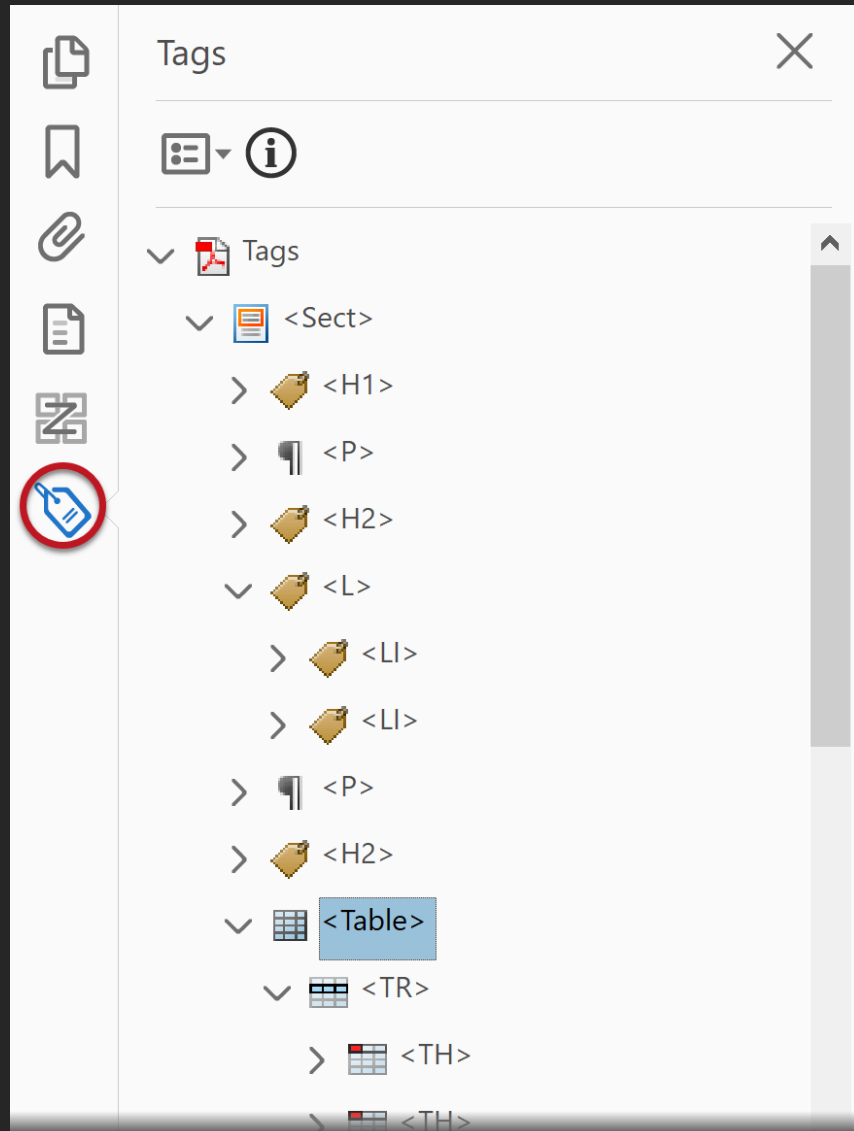
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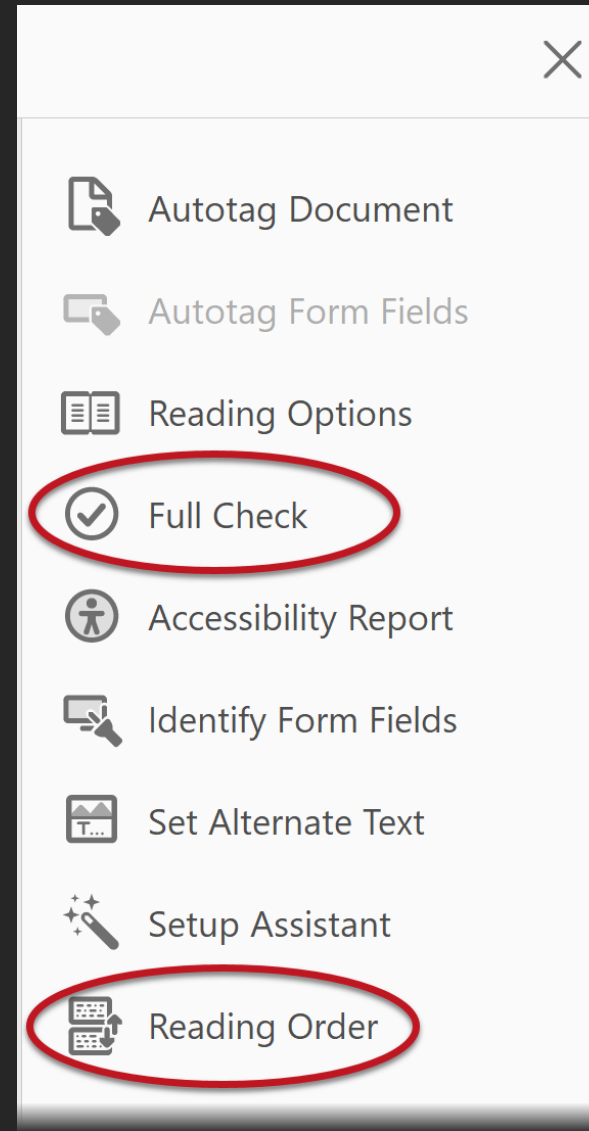


Tags

Tags Pane



Accessibility Tools



Main steps

1. Run accessibility “Full Check”
 - Make easy repairs
2. Repair tag structure with “Reading Order” tool
3. Fix content reading order (optional)
4. Verify tag structure and order in “Tags” pane

Thank You!

<http://webaim.org>

- E-mail discussion list
- Monthly newsletter
- Tutorials, articles, and resources
- Blog

