

Web Accessibility 101



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WebAIM.org

Are you a...

- Developer
- Designer
- Web content creator/author
- QA/Evaluation
- 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](#)

 Understanding 1.1.1

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

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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](#)

 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)	<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

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?

Auditory Disabilities



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

Transcription Methods

- Typing
- Stenographer or “Shadow Speaker”
- Automated captioning



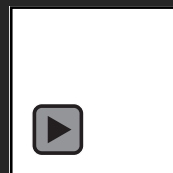


Is officially tomatoes it's prisons rations?
He look for it.

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?

Deaf-blind

- Content accessible to users who are blind **and** to users who are deaf will generally be accessible to users who are deaf-blind.
- Descriptive transcripts provide media accessibility.



Low Vision

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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](#)

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Powerhouse tablets
Built for work and play

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Fire HDX 8.9"
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Fire HDX 10.1"
\$269

kindle fire HD

Our most affordable Kindle Fire, now in HD

Kindle Fire 7" Tablet, Now in HD

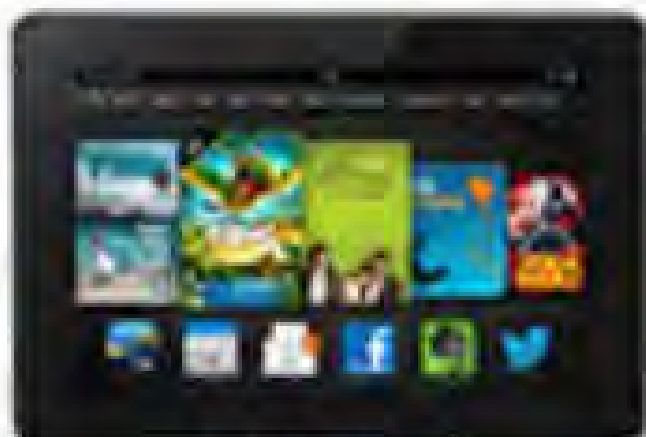
7" HD Display, Wi-Fi, 8GB or 16GB

★★★★★ (9,181 [customer reviews](#))

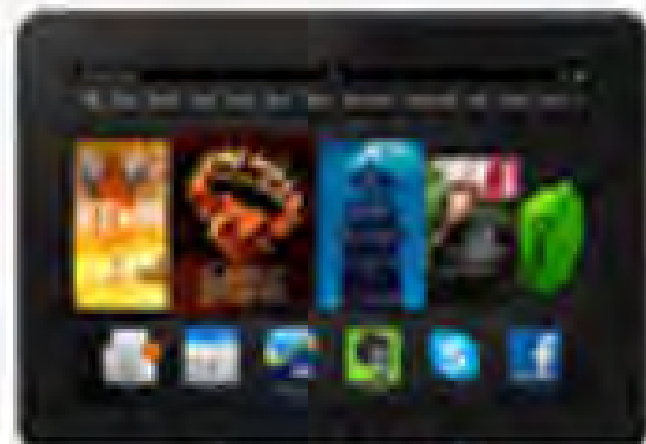
\$139.00 [FREE Shipping Details](#)

Storage Size: **8 GB**

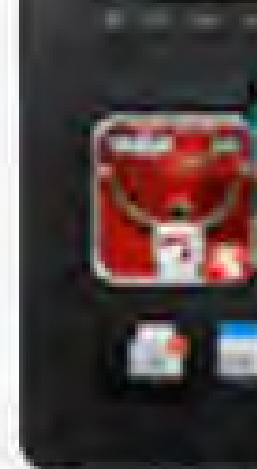




Fire HD
\$139



Fire HDX
\$229



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

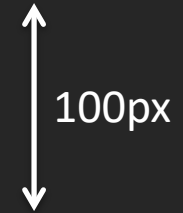
Vitally Important Text

Browser Zoom

- Browser controls
 - Larger: Ctrl/command & +
 - Smaller: Ctrl/command & -
 - Reset : Ctrl/command & 0
- Responsive design supports users with low vision who zoom page content
- Zoomed content will trigger responsive breakpoints
- Some users may adjust only text sizes
 - Test in Firefox

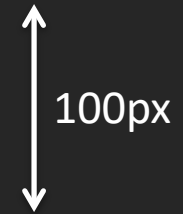
Avoid CSS height

I am some text in a div
that has a pixel height



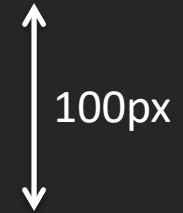
Avoid CSS height

I am some text in a
div that has a pixel
height



CSS min-height

I am some text in a
div that has a pixel
min-height



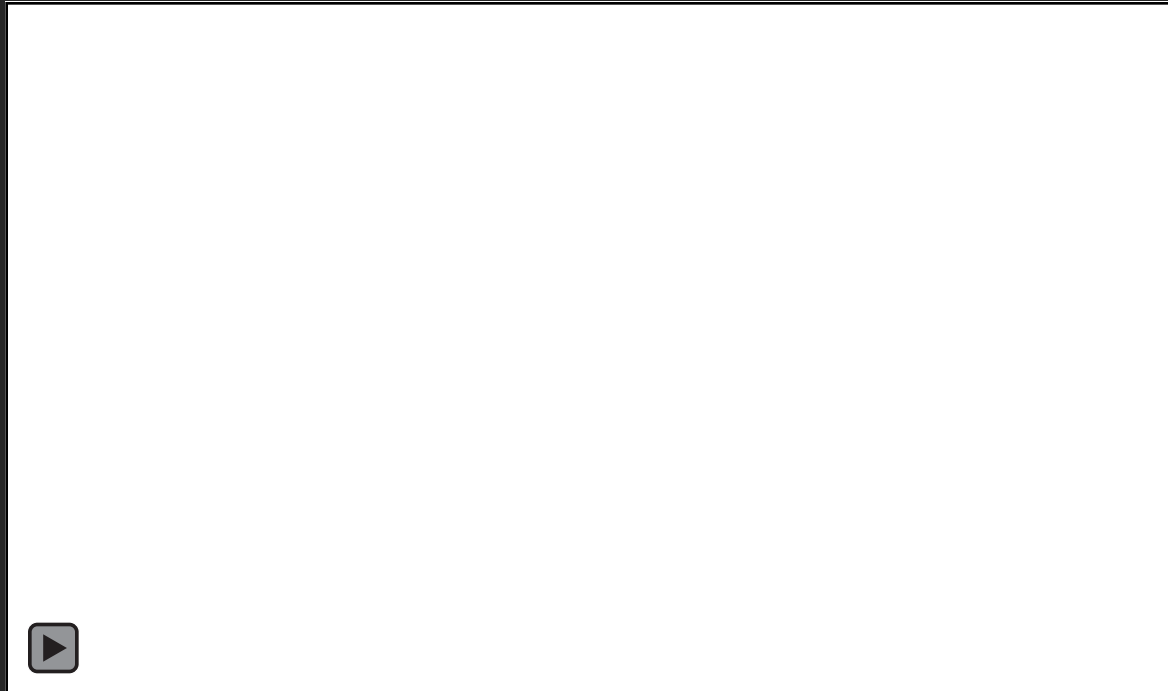
WCAG Zoom Requirements

- 1.4.4 Resize text (Level AA)
 - “Except for captions and images of text, text can be resized without assistive technology up to 200% without loss of content or functionality.”
 - Zoom to 200% is supported.
- 1.4.10 Reflow (Level AA - WCAG 2.1)
 - “Content can be presented without loss of information or functionality...” and without horizontal scrolling (except when necessary) at 400% zoom with viewport width at 1280 pixels.
- Consider text sizing
 - Perhaps to 130%-150%

200% Zoom on CNN.com



Use click to trigger hover interactions



WCAG 2.1 – Content on Hover or Focus (Level AA)

Content that appears on hover and focus must be:

- “Dismissible...without moving pointer hover or keyboard focus”: Esc key dismisses
- “Hoverable”: Doesn’t disappear when moving the pointer to the new content
- “Persistent”: Visible until you move mouse away or dismiss it

Present messaging close to form controls

first name



Please enter your first name.

where do you live?



Please choose your country.

birthday

 19 

Your year of birth does not appear valid.

Provide Sufficient Contrast

Inverted and High Contrast

The image is a screenshot of the Amazon website, presented in an inverted (black background) and high-contrast style. At the top, the Amazon logo is visible with the 'Try Prime' tagline. Navigation links include 'Your Amazon.com', 'Today's Deals', 'Gift Cards', 'Sell', and 'Help'. Below the navigation is a search bar with 'Kindle Store' entered and a 'Go' button. A secondary navigation bar lists categories like '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 product listing for the 'Kindle Fire HD' tablet. It includes the text 'Our most affordable Kindle Fire, now in HD', a 5-star rating with '(9,181 customer reviews)', and a price of '\$139.00' with 'FREE Shipping Details'. The 'Storage Size' section shows '8 GB' selected over '16 GB'. The 'Offer Type' section shows 'With Special Offers' selected over 'Without Special Offers'. A small note at the bottom right says 'Special offers and on the Kindle Fire'.

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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 16 GB

Offer Type: With Special Offers Without Special Offers
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 =

$$\begin{aligned} R_{sRGB} \leq 0.03928 \text{ then } R &= R_{sRGB} / 12.92 \\ \text{else } R &= ((R_{sRGB} + 0.055) / 1.055) ^ 2.4 \end{aligned}$$

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 (#E30000) 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



Exceptions

“Incidental”



"Inactive"

“Logotypes”

WebAIM
web accessibility in mind

WCAG 2.1: Non-text Contrast

- Level AA
- 3:1 contrast of:
 - User Interface Components
 - Including states (focus indicators, hover states, etc.)
 - Graphical Objects

common

sense

is

vital

when

considering

color

contrast

pass

pass

pass

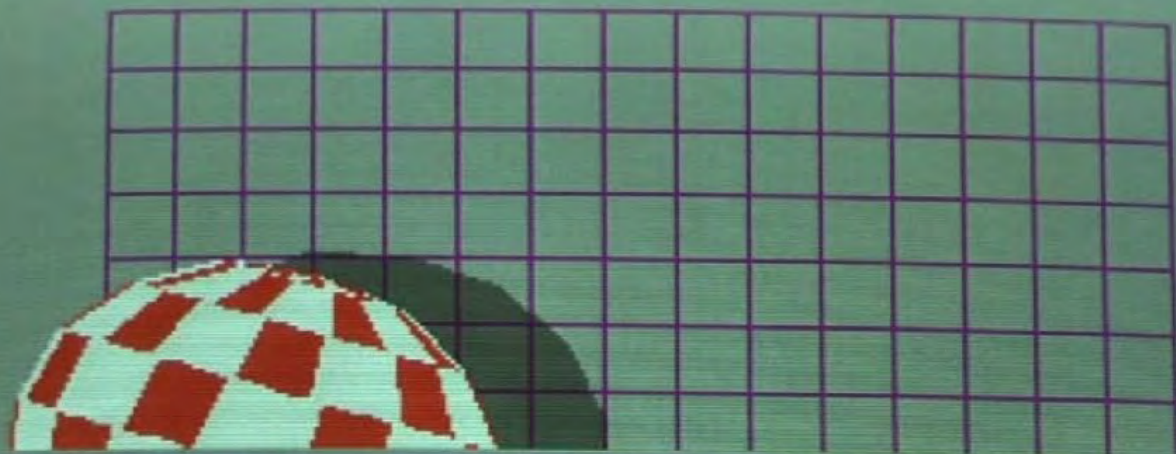
pass

fail

fail

fail

fail



Workbench release. 823336 free memory

DEMONS

Juggler Boing Boxes Lines Dots

Prefs Utilities devs

Shell EXTRAS Empty

A window titled "DEMONS" containing several icons and labels. The icons are: a juggler, a boing ball, a box, a line, and a dot. Below the icons are the labels "Juggler", "Boing", "Boxes", "Lines", and "Dots". At the bottom of the window are three more icons: a shell, a box labeled "EXTRAS", and a box labeled "Empty".

RAM DISK

DH0

Clock V2

AM



I

AM

TEXT

I

AM

TEXT

5.25:1

4:1

I

AM

TEXT

I

AM

TEXT

4.5:1

4.5:1

I

AM

TEXT

I

AM

TEXT

2.79:1

4.65:1

I

AMM

TEXTT

I

I

AM

AM

TEXT

TEXT



I

I

AMM

AMM

TEXT

TEXT



I

I

AM

AM

TEXT

TEXT

|

AM

TEXT

|

AM

TEXT

common

sense

is

vital

when

considering

color

contrast

Color Blindness



An Example

Edible mushrooms are shown in green. Poisonous mushrooms are shown in red.

- 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

Required fields marked in red

Name

Date of birth

Address



Snake River - Classic Boats . . . Classic Adventure (8-Mile Whitewater)

2 Guests

SEP 2018						
S	M	T	W	T	F	S
26.	27.	28.	29.	30.	31.	1.
2.	3.	4.	5.	6.	7.	8.
9.	10.	11.	12.	13.	14.	15.
16.	17.	18.	19.	20.	21.	22.
23.	24.	25.	26.	27.	28.	29.
30.						

■ = Available ■ = Not Available



1. Ensure sufficient contrast
2. Do not rely on color alone

Requirements for non-underlined links

- A 3:1 contrast ratio between link text and non-link text
- Link must present a non-color cue (typically underline) on mouse hover AND keyboard focus

I have read, and I consent and agree to PayPal's [User Agreement](#) and [Privacy Policy](#) (including PayPal processing and disclosing my personal data). I understand I can change my communication preferences at any time.

I have read, and I consent and agree to PayPal's User Agreement and Privacy Policy (including PayPal processing and disclosing my personal data). I understand I can change my communication preferences at any time.


I have read and agree to PayPal's **User Agreement**, **Privacy Policy** and **Electronic Communications Delivery Policy**. If you provide a mobile phone number, you agree that PayPal may contact you to service your account, investigate fraud, or collect a debt, using autodialed or prerecorded calls or texts. You may decline to receive autodialed or prerecorded calls or texts and still use PayPal by contacting **customer support**.

I have read and agree to PayPal's **User Agreement**, **Privacy Policy** and **Electronic Communications Delivery Policy**. If you provide a mobile phone number, you agree that PayPal may contact you to service your account, investigate fraud, or collect a debt, using autodialed or prerecorded calls or texts. You may decline to receive autodialed or prerecorded calls or texts and still use PayPal by contacting **customer support**.

WebAIM Link Contrast Checker

webaim.org/resources/linkcontrastchecker/

Blindness

WebAIM 
web accessibility in mind

services articles resources community

Search WebAIM

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

WebAIM Blog

Newsletter

E-mail Discussion List

Twitter

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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Main Navigation

- [Services](#)
- [Articles](#)
- [Resources](#)
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Search Terms 

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- [Newsletter](#)
- [E-mail Discussion List](#)
- [Twitter](#)

Screen Reader Users

- Not all screen reader users are completely 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.

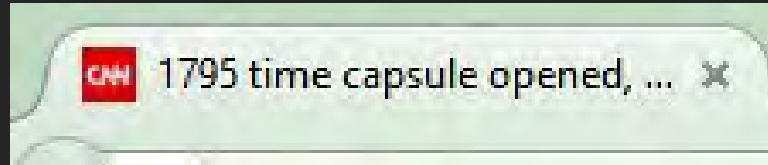
Common screen readers

- Windows
 - JAWS
 - JAWS + IE is still common
 - NVDA
 - Narrator: Uncommon but growing
- Mac and iOS – VoiceOver
 - 75% of mobile
- Android
 - Talkback (mostly)
- ChromeVox: Very uncommon

Headings

- The most common method for finding information on a page
 - 67% of WebAIM survey respondents
- Headings should describe a section of content.
 - Should never be empty
- Usually one `<h1>` per page.
- In isolation, document headings serve as a table of contents.
- Do not skip heading levels (e.g., `<h2>` to `<h4>`).
 - Can skip backward (e.g., `<h4>` to `<h2>`).

Page Title



- `<title>1795 time capsule opened, ...</title>`
- Often the first thing read
- Should be succinct and descriptive
- Put the most useful information first
- Should usually match or be similar to the `<h1>`

HTML Regions

- `<header>`
- `<nav>`
- `<main>`
- `<aside>`
- `<footer>`

Alternative Text

Alternative Text

- Read by screen readers
- Alternative to images if they are disabled or not supported
- Used by search engines

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?

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.





alt="WebAIM - Web
Accessibility in Mind"

Can be presented two ways...

- In the **alt attribute** of the img element.
``
- In the **context** or surroundings of the image itself.



```
<a href="minivans.html">  
    <br>  
    Minivans  
</a>
```




```
<a href="minivans.html">  
    <br>  
    Minivans  
</a>
```

“Null” vs. No Alt Attribute

- Null alt (alt="") = Declaration
 - Decorative
 - Alt text is in nearby text
- No alt = Omission
 - Screen readers will probably treat it the same as alt="".

Images that are the only thing
within a link must **ALWAYS**
have alternative text

...and image map hot-spots and image buttons too.

Image Link



Text Link

```
<a href="minivans.html">  
</a>  
<br>  
<a href="minivans.html">Minivans</a>
```

Download the Employment Application

```
<a href="app.pdf">Download the  
Employment Application  
</a>
```

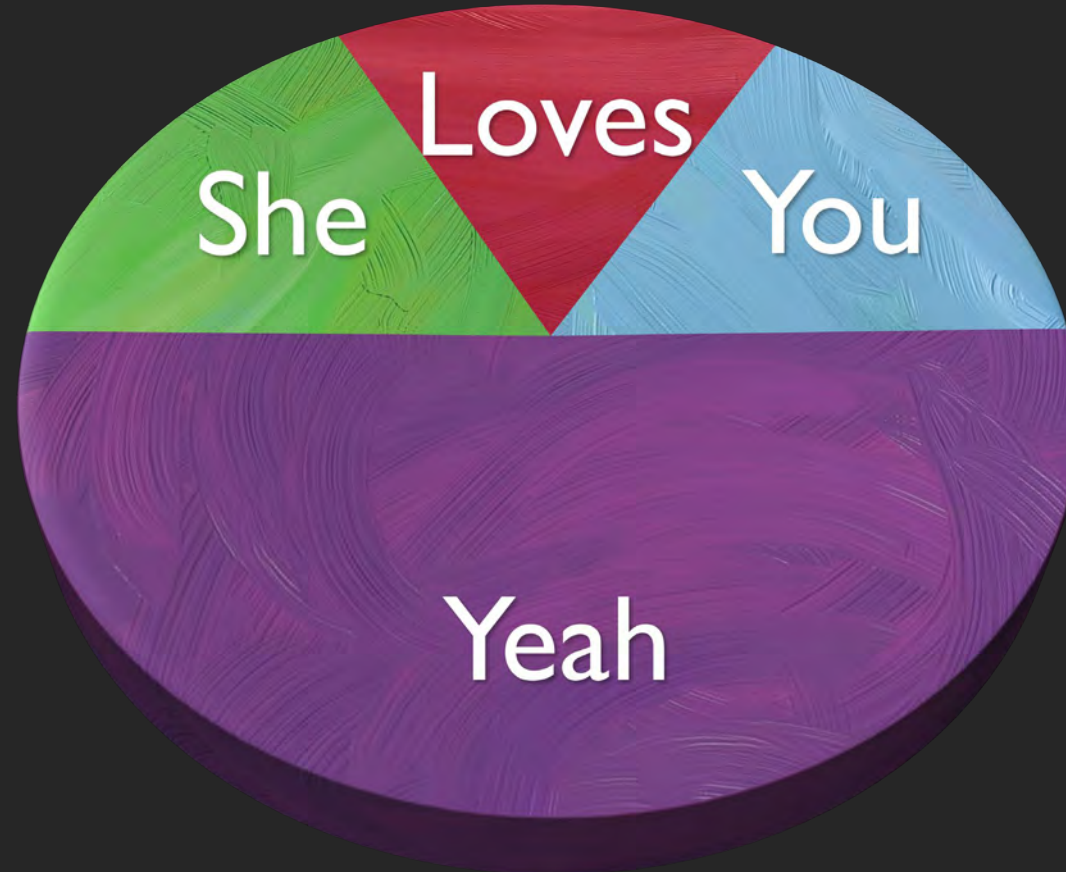
Download the Employment Application

```
<a href="app.pdf">Download the  
Employment Application  
</a>
```



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

Complex Images



Contents of a Beatles Song

Complex Images

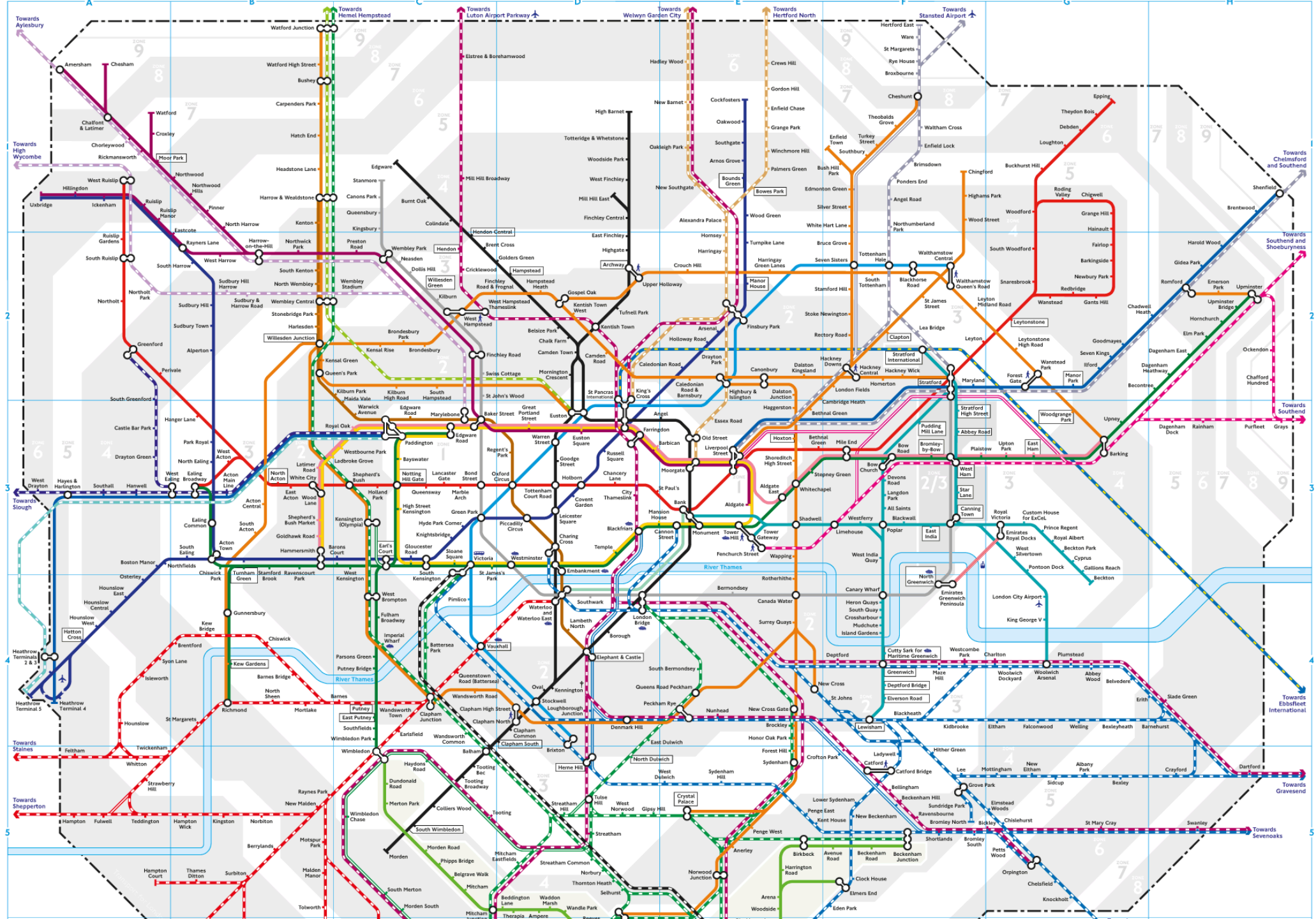
- Provide the alternative in context **OR**
- Provide a link to a page that contains the longer description
- `longdesc` can reference the long description page, though support is poor and it has been dropped from HTML5
 - ``
- The main image should still have some alt text!

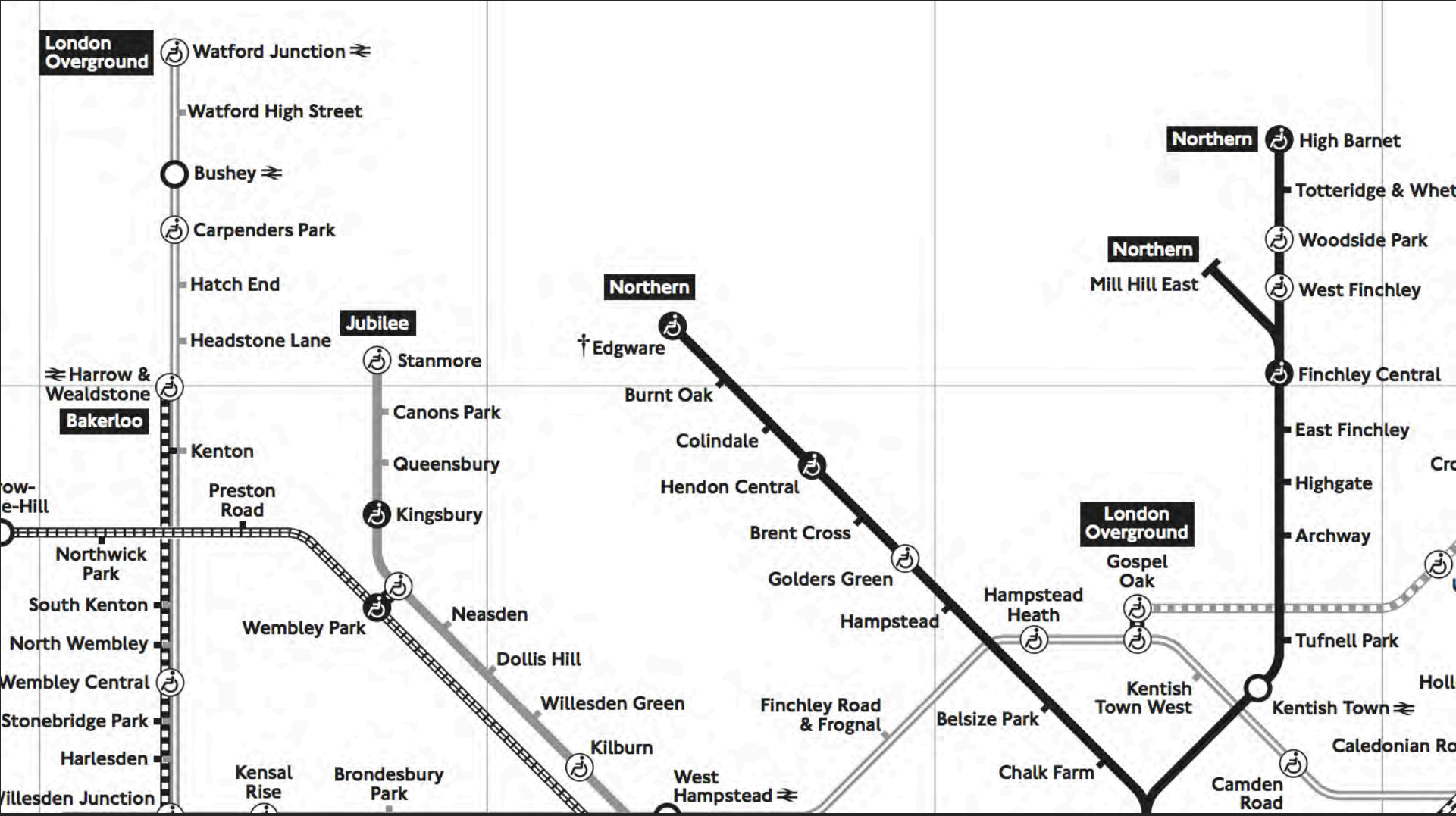
London's Rail & Tube services

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
 - 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

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

Access options

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

Screen Reader Demonstration

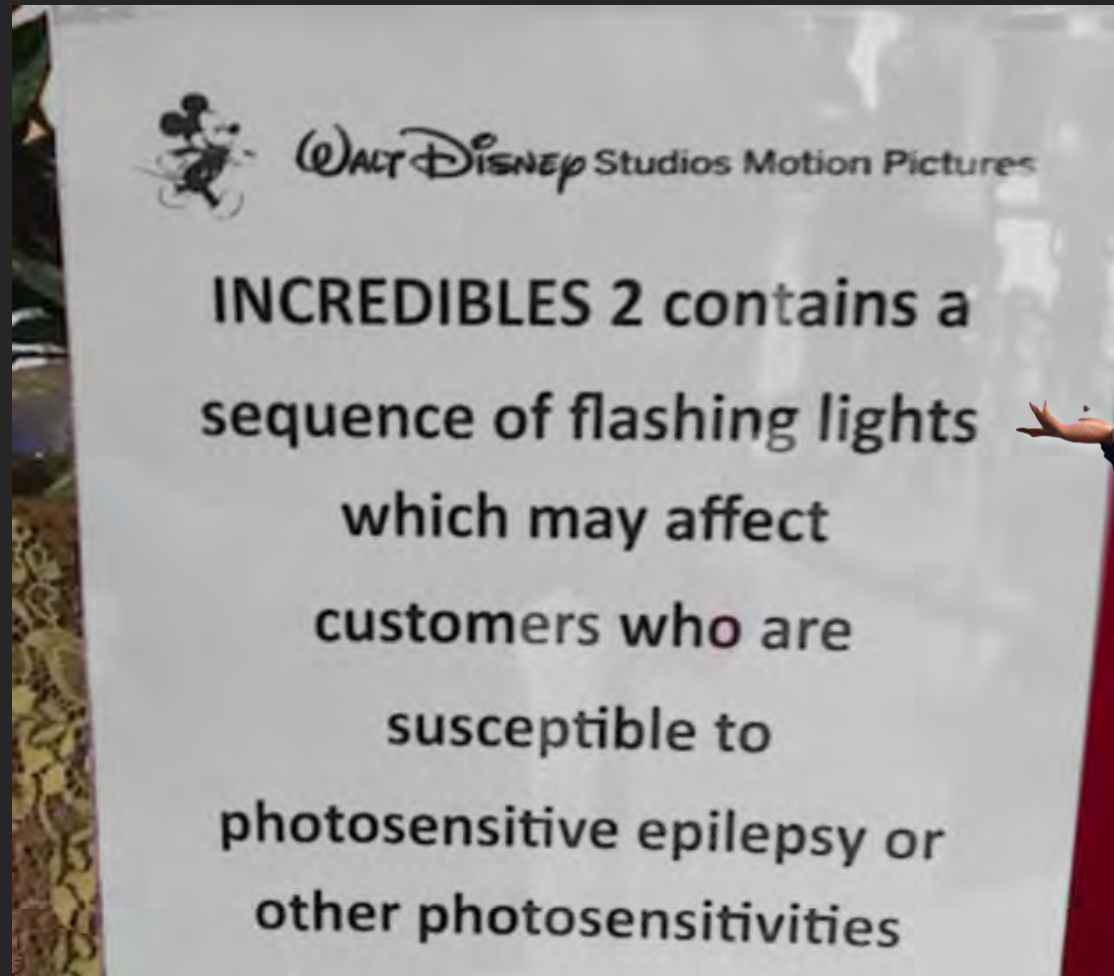
Use a screen reader

- Focus on navigation, forms, document structure, and dynamic content
- WebAIM tutorials for [JAWS](#), [NVDA](#), and [VoiceOver](#)
- Try testing without the mouse or monitor
- Don't worry about pronunciation
- Sometimes it's the screen reader's fault

Screen reader shortcuts

Command	JAWS/NVDA	VoiceOver
“Special” key	Insert	control + option = VO
Read all	Insert + down arrow	VO + A
Read one line	Down arrow	VO + Arrow
Stop reading	Ctrl	Control
Links/Form fields	Tab	tab
Headings	H, 1-6	VO + command + H
Forms	F	VO + command + J
Tables	T	VO + command + T
“Rotor”		VO + U + Arrow keys
Landmarks	R (JAWS), D (NVDA)	Rotor

Photosensitive Epilepsy



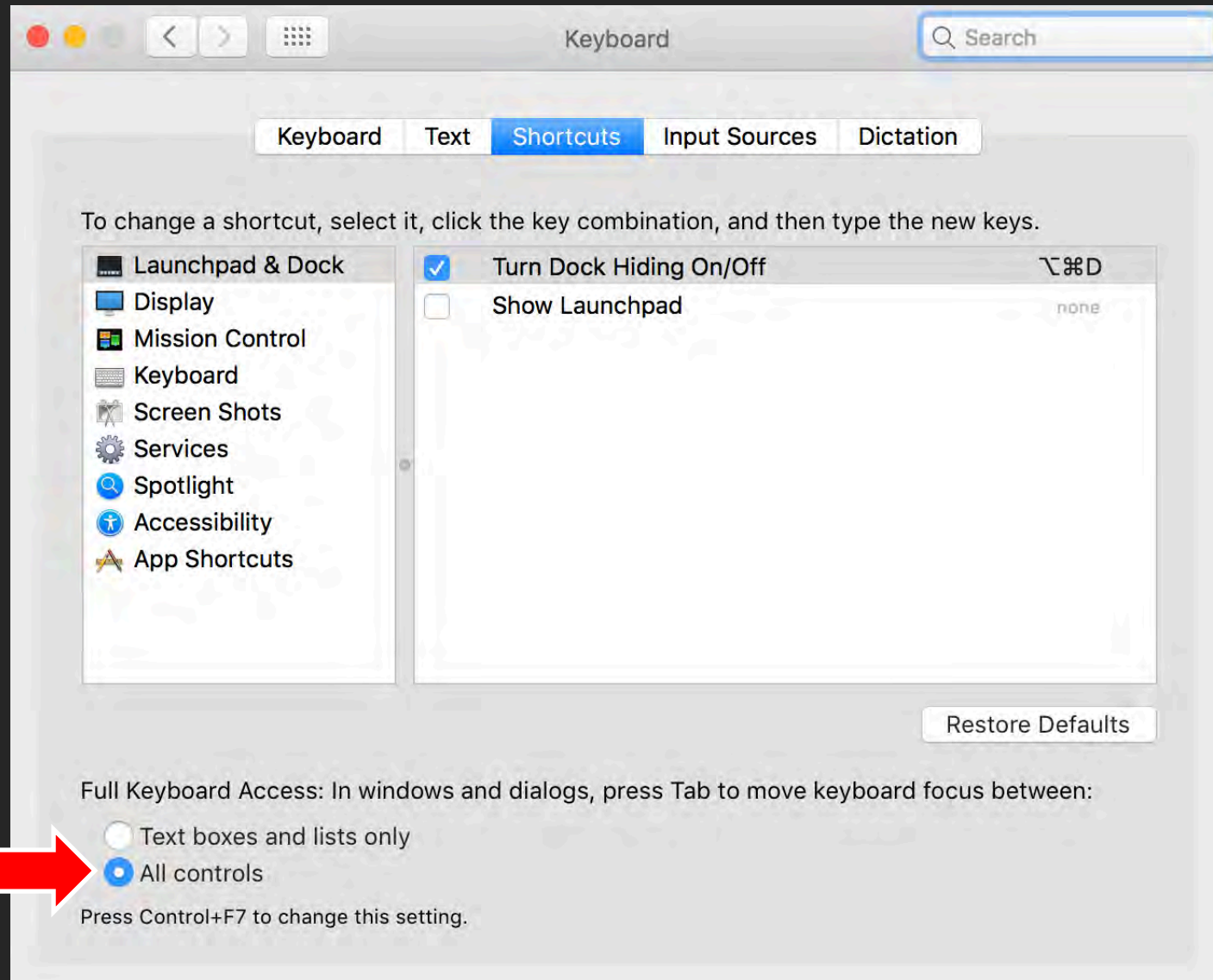
Be careful with flashing/strobing content

- 3 times per second or greater
- Size, brightness, and red threshold
- Annoying rule

Standard keystrokes

- Navigate links, form controls, etc.: Tab, Shift + Tab
- Link: Enter
- Button: Enter or Spacebar
- Checkbox: Spacebar
- Radio buttons: ↑/↓ and ←/→
- Select menu: ↑/↓, Letters, Spacebar to expand
- Close: Esc
- Other widgets: use standard keyboard interaction patterns

Some tweaking required on Mac



Our most affordable Kindle Fire, now in HD



Product Tour



See 1 customer image
Share your own customer images

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- 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](#)

Meaningful link text

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

Other principles

- Ensure adequate spacing between clickable elements
- Make sure clickable items look clickable
(and vice versa)
- Don't use the `accesskey` attribute
- Be careful with inactive/disabled controls

Cognitive/Learning Disabilities

- Largest disability group. Larger than all the others put together.
- Because users vary greatly, we will focus on generic recommendations.

Cognitive/Learning Disabilities

- Be careful with movement and other distractions
- Use good organization (headings, lists, etc.)
- Focus on important content
- Simplify
 - “readable to users with a lower secondary reading level”
(WCAG AAA)

Cognitive/Learning Disabilities

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

Use lists appropriately

- `` for ordered, hierarchical lists
- `` for unordered, bulleted lists
- `<dl>` for definition/description list (name/value pairs in HTML5)
 - FAQ

Fonts & Text

- Absolute (px, pt, etc.) or relative sizes (% , em, etc.)
- Font faces
 - Web fonts and embedded fonts are OK
 - Choose good, legible fonts
- Be careful with ALL CAPS
 - Use CSS `text-transform: uppercase`
- Consider special characters and verbosity
 - \$.99 vs \$99
 - Minus symbol for negative numbers
 - Aural CSS – great idea, but no current support

WCAG 2.1 - Text Spacing (Level AA)

“No loss of content or functionality occurs” when the user increases spacing between:

- Paragraphs: $2 \times$ font size
- Lines: $1.5 \times$ font size
- Words: $0.16 \times$ font size
- Letters: $0.12 \times$ font size

Text Spacing Applied

Earlier guidelines [\[edit\]](#)

The first web accessibility guideline was compiled by Gregg Vanderheiden and released in January 1995, just after the 1994 Second International Conference on the World-Wide Web (WWW II) in Chicago (where [Tim Berners-Lee](#) first mentioned disability access in a keynote speech after seeing a pre-conference workshop on accessibility led by Mike Paciello).^[2]

Over 38 different Web access guidelines followed from various authors and organizations over the next few years.^[3] These were brought together in the *Unified Web Site Accessibility Guidelines* compiled at the [University of Wisconsin-Madison](#).^[4] Version 8 of the *Unified Web Site Accessibility Guidelines*, published in 1998, served as the starting point for the W3C's WCAG 1.0.^[5]

WCAG 1.0 [\[edit\]](#)

The WCAG 1.0 was published and became a [W3C recommendation](#) on 5 May 1999. They have since been superseded by WCAG 2.0.

WCAG 1.0 consist of 14 guidelines—each of which describes a general principle of accessible design. Each guideline covers a basic theme of web accessibility and is associated with one or more checkpoints that describes how to apply that guideline to particular webpage features.

- Guideline 1: Provide equivalent alternatives to auditory and visual content
- Guideline 2: Don't rely on colour alone
- Guideline 3: Use markup and style sheets, and do so properly
- Guideline 4: Clarify natural language usage
- Guideline 5: Create tables that transform gracefully
- Guideline 6: Ensure that pages featuring new technologies transform gracefully
- Guideline 7: Ensure user control of time sensitive content changes
- Guideline 8: Ensure direct accessibility of embedded user interfaces
- Guideline 9: Design for device independence

Earlier guidelines [\[edit\]](#)

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- Guideline 1: Provide equivalent alternatives to auditory and visual content
- Guideline 2: Don't rely on colour alone
- Guideline 3: Use markup and style sheets, and do so properly
- Guideline 4: Clarify natural language usage

Tables

Layout Tables

Heat wave linked to temperatures



After three years of effort city scientists now agree that the primary cause of the 2003 heatwave was hot air from our

[MORE](#) ➤➤

Man Gets Nine Months in Violin Case



Mayor: These kinds of crimes need more creative, effective punishments. For example, we could require compulsory

[MORE](#) ➤➤

Lack of brains hinders research



Brain donations: huge drop off in brain donations due to the great 'success' of 'Slow Traffic, Safe Streets' policy

[MORE](#) ➤➤

Layout Tables

<p>C Heat wave linked to temperatures</p>	<p>C Man Gets Nine Months in Violin Case</p>	<p>C Lack of brains hinders research</p>
		
<p>After three years of effort city scientists now agree that the primary cause of the 2003 heatwave was hot air from our</p> <p>MORE ➡</p>	<p>Mayor: These kinds of crimes need more creative, effective punishments. For example, we could require compulsory</p> <p>MORE ➡</p>	<p>Brain donations: huge drop off in brain donations due to the great 'success' of 'Slow Traffic, Safe Streets' policy</p> <p>MORE ➡</p>

Layout Tables

Heat wave linked to temperatures



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[MORE](#) ➔

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[MORE](#) ➔

Data Tables

Class Schedule

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

The image shows a table with three columns: Class Name, Course Number, and Location. The first row contains the headers. The second row contains 'Advanced Website Development', 'BIS 5650', and 'B105'. The third row contains 'Database Management', 'BIS 3330', and 'B220'. Yellow arrows point from each header to its corresponding data cell. Additionally, yellow arrows point from the 'Advanced Website Development' cell to the 'BIS 5650' cell, and from the 'Database Management' cell to the 'BIS 3330' cell. A yellow bracket is positioned above the table, spanning all three columns.

Data tables

```
<table>
<caption>Class Schedule</caption>
<tr>
  <th scope="col">Class Name</th>
  <th scope="col">Course Number</th>
  <th scope="col">Location</th>
</tr>
<tr>
  <th scope="row">Advanced Website Development</th>
  <td>BIS 5650</td>
  <td>B105</td>
</tr>
...
```



WAVE

web accessibility evaluation tool

wave.webaim.org

Document Practice

<https://goo.gl/GcKib9>

Thank You!

<http://webaim.org>

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- Blog