

Web Accessibility 101



John B. Northup

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](#)

❶ 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](#)

❶ 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
<u>1.1.1 Non-text Content</u> (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
<u>1.2.1 Prerecorded Audio-only and Video-only</u> (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.
<u>1.2.2 Captions (Prerecorded)</u>	<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

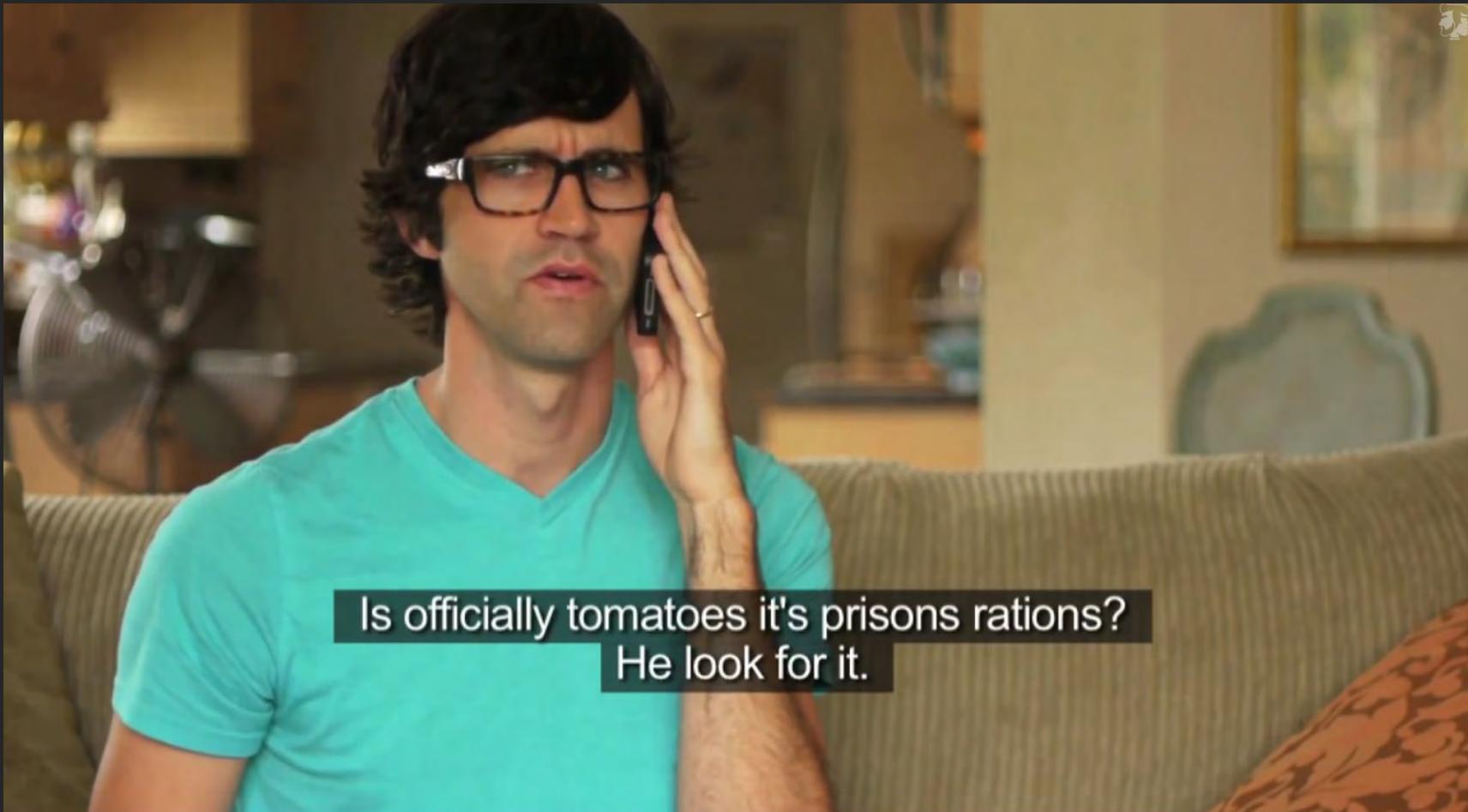


1. Provide captions for video & live audio.
2. Provide text transcripts for all audio content.

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

amazon Try Prime

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

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

Kindle Fire

Powerhouse tablets Built for work and play

Compare Kindles ▼



Fire HD \$139 Fire HDX \$229 Fire HDX 8.9" \$379 Fire HD 8" \$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**

8 GB **16 GB**

Offer Type: **With Special Offers**

With Special Offers **Without Special Offers**

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

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Kindle Store ▾

Go

Hello. Sign
Your Ac

Buy a Kindle

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Daily Deals

Free Reading Apps

Kindle Singles

Newsstand

Accesso

Kindle Fire

Powerhouse tablets
Built for work and play

[Compare Kindles ▾](#)

Fire HD
\$139



Fire HDX
\$229



Fire HDX 8.9"
\$379



Fire H
\$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)

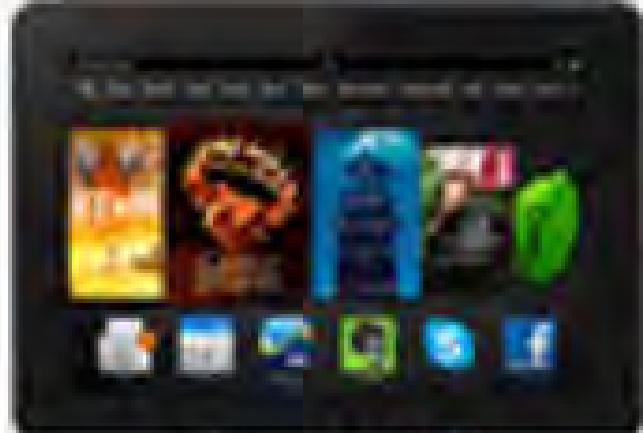
\$139.00 FREE Shipping [Details](#)

Storage Size: **8 GB**





Fire HD
\$139



Fire HDX
\$229



Fi

ay

dle Fire, now in HD

Kindle Fire 7" Tablet, Now in HD
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



100px

A vertical double-headed arrow with a horizontal line at the top and a vertical line at the bottom, indicating a height of 100 pixels.

Avoid CSS height

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



100px

A vertical double-headed arrow with a horizontal line at the top and bottom, indicating a height of 100 pixels.

CSS min-height

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



100px

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

!

Your year of birth does not appear valid.

Provide Sufficient Contrast

Inverted and High Contrast

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

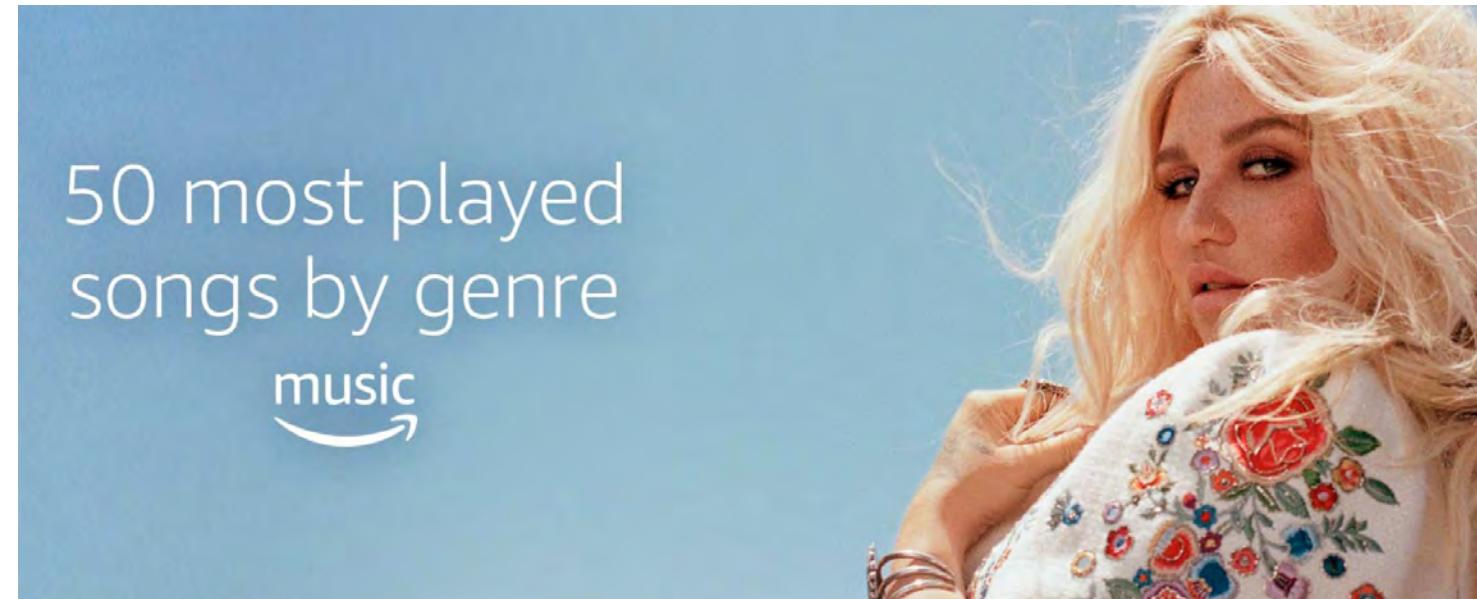
$\geq 18\text{pt}$ (24px)

BOLD: $\geq 14\text{pt}$ (18.67px)

WebAIM Contrast Checker

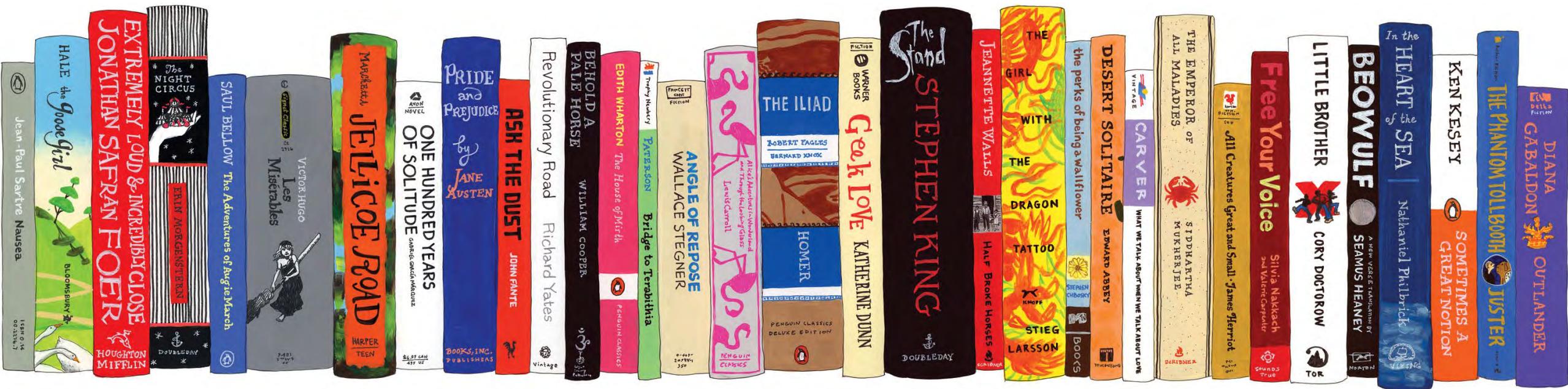
webaim.org/resources/contrastchecker/

“Images of text”



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

DEMOS



Juggler



Boing



Boxes



Lines



Dots

RAM DISK



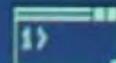
DH0

Clock

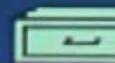
V2

AM

Prefs Utilities devs



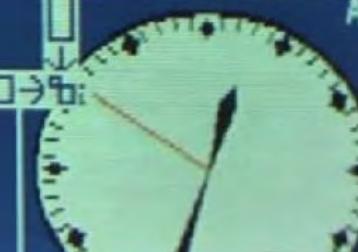
shell



EXTRAS



Empty



I

AM

TEXT

I

AM

TEXT

5.25:1

4:1

I

AM

TEXT

I

AM

TEXT

4.5:1

4.5:1

AM

TEXT

AM

TEXT

2.79:1

4.65:1

AM

TEXT

I

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TEXT

I

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.						

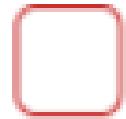
■ = Available ■ = Not Available



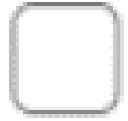
1. Ensure sufficient contrast
2. Do not rely on color alone

Requirements for non-underlined links

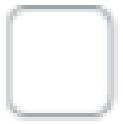
- A 3:1 contrast ratio between link text and non-link text
- Link must present a non-color cue (typically underline) on mouse hover AND keyboard focus



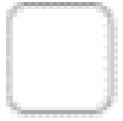
I have read, and I consent and agree to PayPal's [User Agreement](#) and [Privacy Policy](#) (including PayPal processing and disclosing my personal data). I understand I can change my communication preferences at any time.



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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](#).

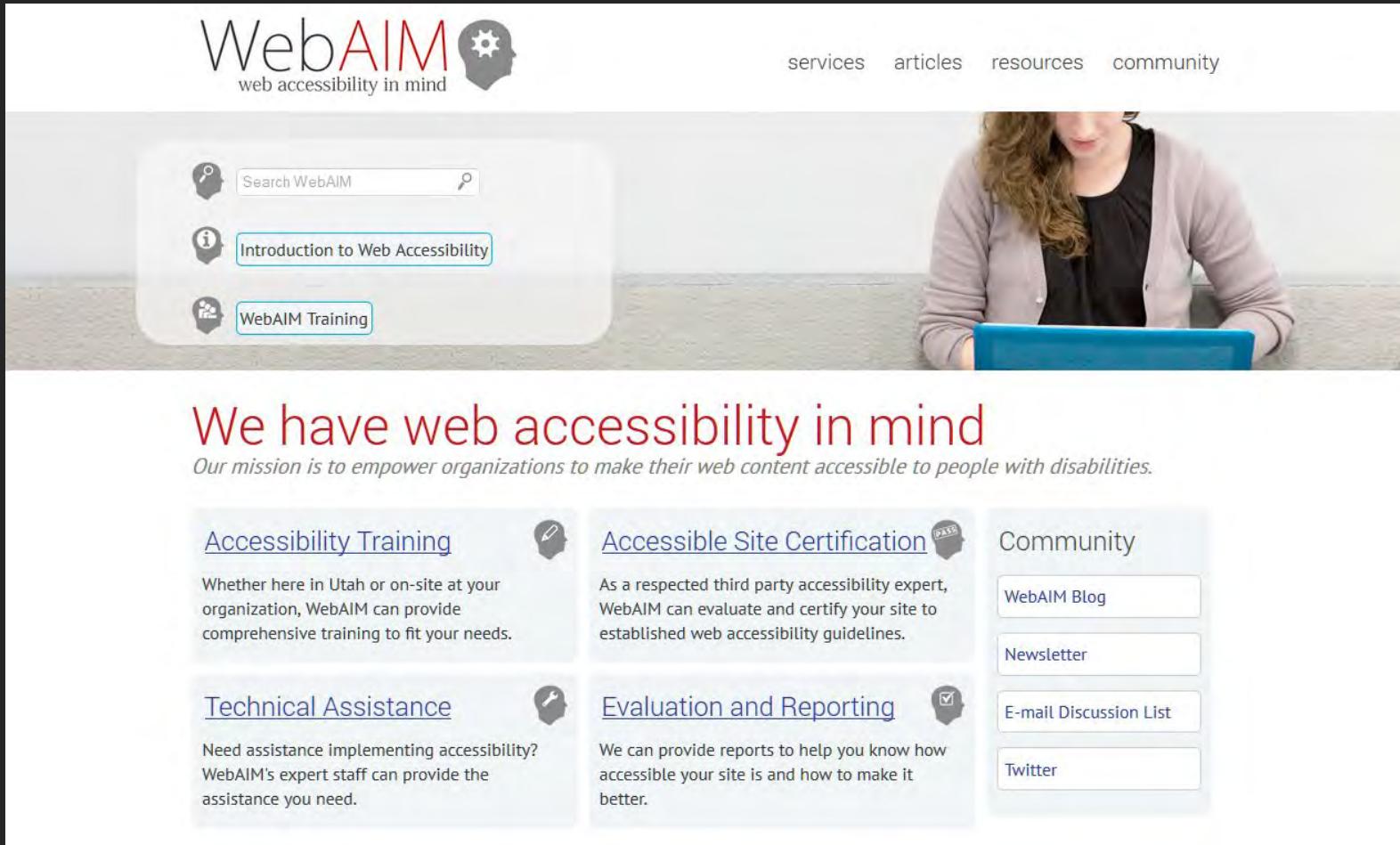


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WebAIM Link Contrast Checker

webaim.org/resources/linkcontrastchecker/

Blindness



The screenshot shows the homepage of the WebAIM website. The header features the "WebAIM" logo with the tagline "web accessibility in mind" and a gear icon. The navigation menu includes "services", "articles", "resources", and "community". Below the header is a search bar and a sidebar with links for "Introduction to Web Accessibility" and "WebAIM Training". The main content area features a photograph of a woman with curly hair sitting at a desk, looking at a laptop. The text "We have web accessibility in mind" is prominently displayed in red, followed by the mission statement: "Our mission is to empower organizations to make their web content accessible to people with disabilities." Below this, there are four main service sections: "Accessibility Training" (with a person icon), "Accessible Site Certification" (with a gear icon), "Community" (with a list of links: "WebAIM Blog", "Newsletter", "E-mail Discussion List", and "Twitter"), "Technical Assistance" (with a wrench icon), and "Evaluation and Reporting" (with a checkmark icon). Each service section includes a brief description.

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.

[skip to main content](#)

WebAIM - Web Accessibility In Mind

Main Navigation Services Articles Resources Community

Search Terms

Introduction to Web Accessibility

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Community



Main Navigation

- [Services](#)
- [Articles](#)
- [Resources](#)
- [Community](#)

Search Terms 

[Introduction to Web Accessibility](#)

[WebAIM Training](#)

We have web accessibility in mind

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Community

- [WebAIM Blog](#)
- [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.

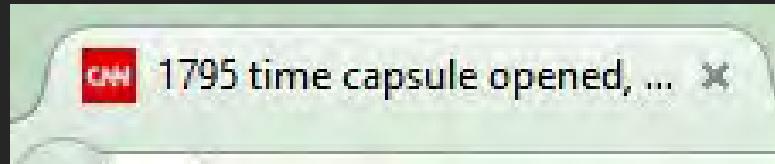
Common screen readers

- 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



Minivans

Text Link

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

Download the Employment Application



Download the
Employment Application

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

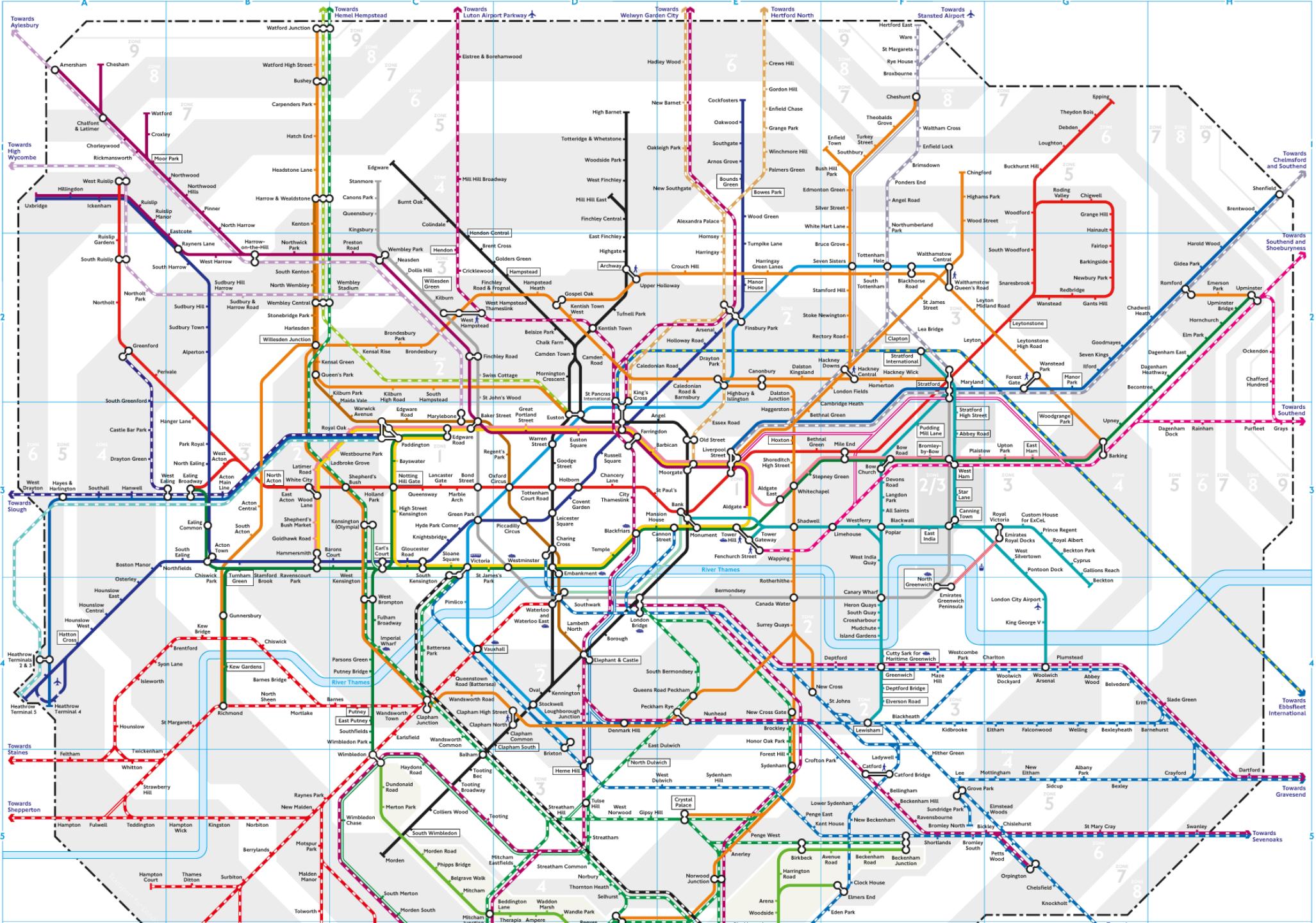
Complex Images

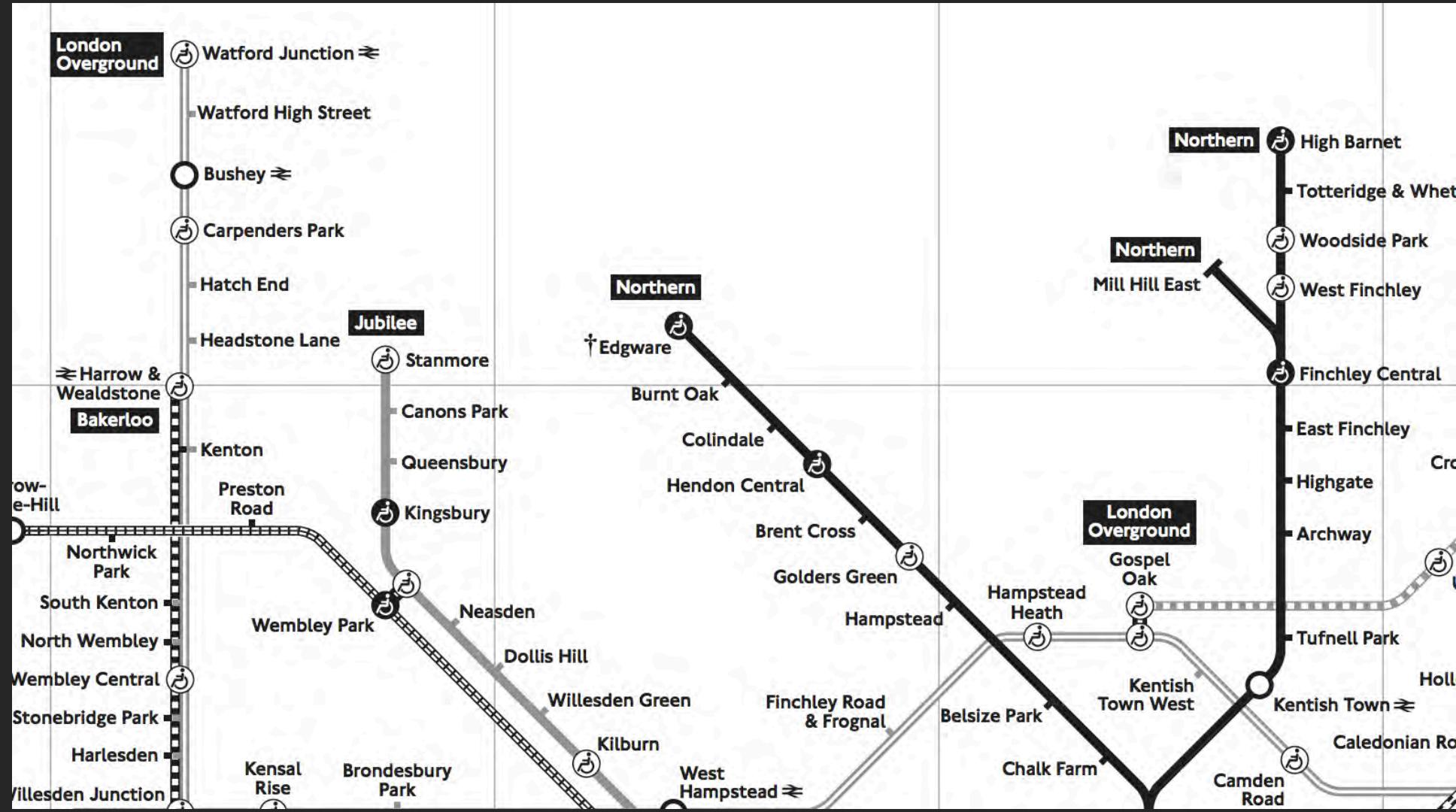
- Provide the alternative in context **OR**
- Provide a link to a page that contains the longer description
- `longdesc` can reference the long description page, though support is poor and it has been dropped from HTML5
 - ``
- The main image should still have some alt text!

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
	c2c
	Gatwick Express
	Great Northern
	Great Western Railway
	Greater Anglia
	Heathrow Express
	Southern
	Southeastern
	Southeastern high speed
	South Western Railway
	Thameslink
	West Midlands Trains
	London Trams zone 2
	London Trams zone 3
	London Trams zone 4
	London Trams zone 5
	London Trams zone 6
	London Trams zone 7
	London Trams zone 8
	London Trams zone 9
	Stratford
	Station in both far zones
	Interchange stations
	Street level transfer between stations
	Airport
	Riverboat services
	Victoria Coach Station







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

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

	Bus	<input checked="" type="checkbox"/>
	National Rail	<input checked="" type="checkbox"/>
	London Overground	<input checked="" type="checkbox"/>
	River Bus	<input checked="" type="checkbox"/>
	Emirates Air Line	<input checked="" type="checkbox"/>

Show me

	The fastest routes	<input checked="" type="radio"/>
	Routes with fewest changes	<input type="radio"/>
	Routes with least walking	<input type="radio"/>

Access options

<input checked="" type="radio"/>	No accessibility requirement
<input type="radio"/>	Use escalators, not stairs
<input type="radio"/>	Use stairs, not escalators
<input type="radio"/>	Step-free to platform only
<input type="radio"/>	Full step-free access

Screen Reader Demonstration

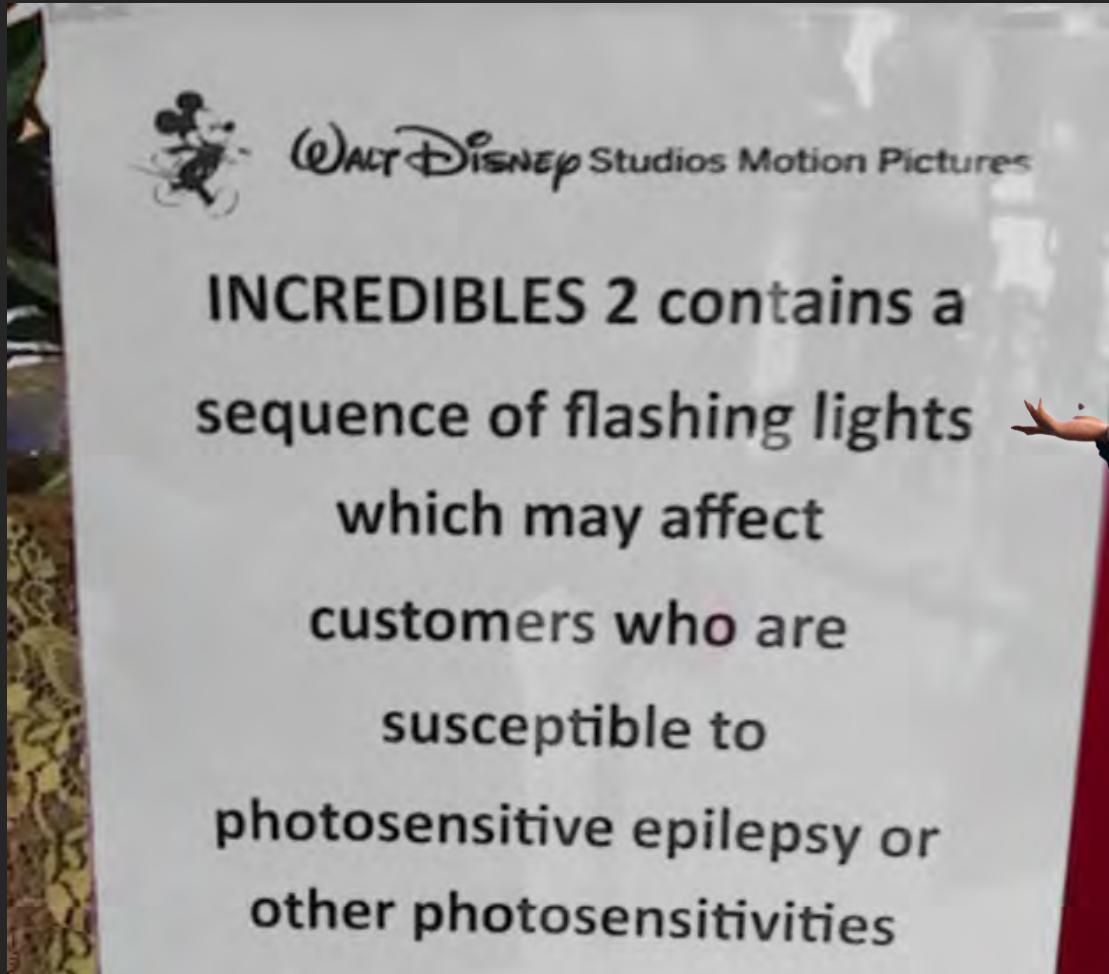
Use a screen reader

- 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



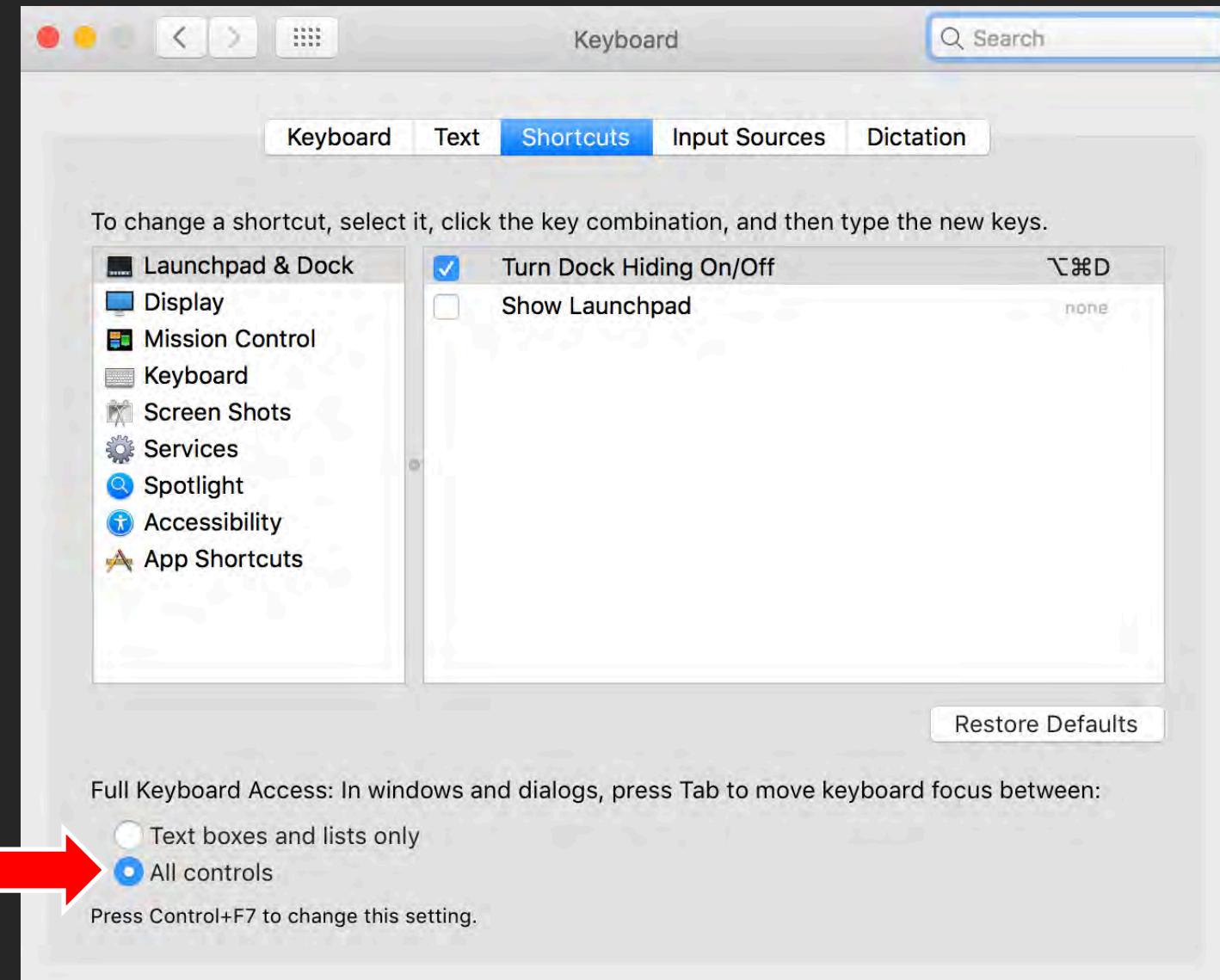
Be careful with flashing/strobing content

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

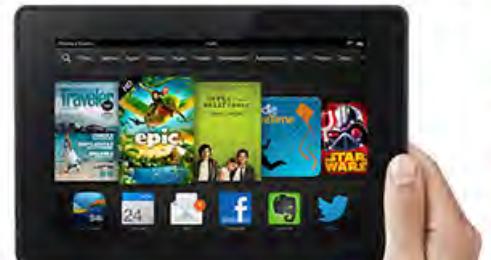
Standard keystrokes

- Navigate links, form controls, etc.: Tab, Shift + Tab
- Link: Enter
- Button: Enter **or** Spacebar
- Checkbox: Spacebar
- Radio buttons: \uparrow/\downarrow and \leftarrow/\rightarrow
- Select menu: \uparrow/\downarrow , 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

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(9,193 customer reviews)

\$139.00



Exclusive digital benefits with Amazon Prime

Storage Size: 8 GB

8 GB

16 GB

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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.

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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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[Text spacing bookmarklet](#)

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

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Man Gets Nine Months in Violin Case



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

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Lack of brains hinders research



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

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Layout Tables

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

Layout Tables



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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

Data tables

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    <td>B105</td>  
  </tr>  
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WAVE
web accessibility evaluation tool

wave.webaim.org

Document Practice

<https://goo.gl/GcKib9>

Thank You!

<http://webaim.org>

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