

Web Accessibility Training



Jon Whiting

WebAIM.org

webaim.org/presentations/2024/uofu



Is your web content accessible?

WCAG 2

- Web Content Accessibility Guidelines
- Version 1.0 (1999)
- 2.0 (2008), and 2.1 (2018), WCAG 2.2 (2023)
- ADA requires WCAG 2.1, Level AA for state and local governments

WebAIM WCAG 2 Checklist

Operable

Interface forms, controls, and navigation are operable.

Guideline 2.1

Make all functionality available from a keyboard.

2.1.1 Keyboard

A

2.0

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

2.1.2 No Keyboard Trap

A

2.0

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

2.1.3 Keyboard (No Exception)

AAA

2.0

- All page functionality is available using the keyboard.

2.1.4 Character Key Shortcuts

A

2.1

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

User experience

Screen reader users

- Not all screen reader users are completely blind
- Many have low vision
- Some users have a reading or cognitive disability
- Focus on structure and semantics



Search:



[Introduction to Web Accessibility](#)



[WebAIM Training](#)



We have web accessibility in mind

Expanding the potential of the web for people with disabilities by empowering individuals and organizations to create accessible content.

[Accessibility Training](#)



Whether here in Utah or on-site at your organization, WebAIM can provide web and document 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.

[StrategicA11y](#)



The Strategic Web Accessibility Workshop helps participants optimize their organization's accessibility.

[Evaluation and Reporting](#)



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

Community

[WebAIM Blog](#)

[Newsletter](#)

[E-mail Discussion List](#)

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h2 Main Navigation

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

Navigation

Search

Header

Search:

[Introduction to Web Accessibility](#)

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h1 We have web accessibility in mind

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h2 [Technical Assistance](#)

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

h2 [Evaluation and Reporting](#)

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

h2 [Community](#)

- [WebAIM Blog](#)
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- [Twitter](#)

Main

Structure & Semantics

Recommended screen readers for testing

Desktop

- Windows
 - [JAWS](#) – 41%, \$\$\$
 - [NVDA](#) – 38%, Free
(community-supported)
- [VoiceOver for Mac](#) – 10%,
Built into the OS

Mobile

- [VoiceOver for iOS](#) – 71%
- [Talkback for Android](#) – 28%

Use WebAIM tutorials to learn commands and practice common tasks

Screen Reader Demo

Headings

- The most common method for finding information on a page
 - 72% of WebAIM screen reader user survey respondents
- WCAG failures:
 - Text that should be a heading, but isn't
 - Text that shouldn't be a heading, but is
 - Doesn't align with visual presentation E.g.,
 - H2 – Main topic
 - H1 – Subtopic
 - Headings that are empty or not descriptive

Headings – Best practice

- Page “outline”
- One <h1> per page (usually)
- Do not skip heading levels E.g.,
H2 – Topic
 H4 – Subtopic

Regions and Landmarks

Search:

Introduction to Web Accessibility

WebAIM Training

Introduction to Web Accessibility

[Home](#) > [Articles](#) > Introduction to Web Accessibility

Article Contents

- [Introduction](#)
- [People with Disabilities on the Web](#)
- [Implementing Web Accessibility](#)
- [Principles of Accessible Design](#)
- [Conclusion](#)

Introduction

Most of us can hardly conceive of life without the internet. Some have argued that no other single invention has been more revolutionary since Gutenberg's printing press in the 1490s. The world can be "at your fingertips" at the click of a

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Last updated: Apr 14, 2020

Translations

[Russian](#) by EduTranslator

Related Resources

- [Constructing a POUR Website](#)
- [Visual](#)
- [Hearing](#)
- [Motor](#)
- [Cognitive](#)
- [Seizure](#)
- [Design Considerations](#)

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Institute for Disability Research, Policy, and Practice
Utah State University
6807 Old Main Hill
Logan, UT 84322-6807
435.797.7024

Check Your Accessibility

Web site address:

WAVE

From the Blog

- [Captioning and Sign Language Interpretation in Zoom: Features and Pitfalls](#)
- [Tips for Getting the Most Out of WAVE](#)
- [Flexbox and the Screen Reader Experience](#)
- [Tips for Accessible Screen Sharing](#)

Popular Resources

- [WebAIM Training](#)
- [WCAG 2 Checklist](#)
- [WebAIM Monthly Newsletter](#)
- [Color Contrast Checker](#)
- [Web Accessibility for Designers](#)
- [WAVE Web Accessibility Evaluation Tool](#)

<header>

Search:

Introduction to Web Accessibility

WebAIM Training

<main>

Introduction to Web Accessibility

Last updated: Apr 14, 2020

[Home](#) > [Articles](#) > Introduction to Web Accessibility

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Check Your Accessibility

Web site address:

<header>

<nav>

Search:

Introduction to Web Accessibility

WebAIM Training

<main>

Introduction to Web Accessibility

[Home](#) > [Articles](#) > Introduction to Web Accessibility

Article Contents

- [Introduction](#)
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<aside>

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<nav>

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Check Your Accessibility

Web site address:

ARIA

Accessible Rich Internet Applications

ARIA expands the vocabulary of HTML

Rule #1 of ARIA Use

“If you can use a native HTML element or attribute...then do so.”

[Using ARIA \(W3C\)](#)

Rule #1, paraphrased

If you can use HTML, don't use ARIA

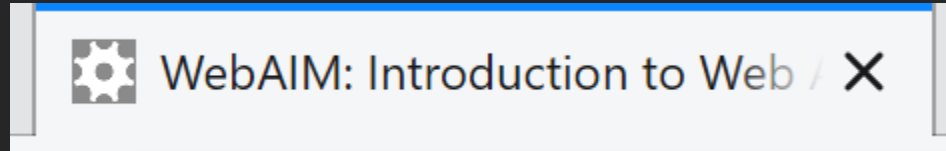
ARIA Landmarks

- `<header>` - `role="banner"`
- `<nav>` - `role="navigation"`
- `<main>` - `role="main"`
- Etc.

Regions/Landmarks

- All content should be in a region
- More doesn't always mean better
- Region/Landmark are interchangeable to screen readers
- We recommend HTML regions (Rule #1)

Page Title



```
<title>WebAIM: Introduction to  
Web Accessibility</title>
```

- Often the first thing seen or read by a screen reader
- Must be descriptive
- Should be succinct
- Should usually match, or be similar to, the first-level heading

[Page title article](#)

WebAIM Web Accessibility Evaluation Guide

WAVE

+ Keyboard testing














+ Browser zoom

+ Contrast tools

+ DevTools

Etc.

Forms

-  ,  - Ensure form controls have descriptive, correctly-associated labels and that `<label>` is used when possible.
 - If a form control gains focus or is activated when its label text is **clicked** with a mouse, then it is likely that the text is a correctly-associated `<label>`.
-  ,  - If a label is not visible, check for a [hidden label](#), [aria-label](#), or [title attribute](#).
-  - If a `<select>` menu does not have a `<label>`, confirm that the default option presents the purpose of the menu.
-  ,  ,  ,  - Use the **Code panel** to explore broken labels.
-  ,  ,  - Look for `<fieldset>/<legend>` where a higher-level description for a group of form fields is needed.
- Required fields are visually apparent and are presented to a screen reader through at least one of the following: label/accessible name, `aria-required`, or the `required` attribute.
- Trigger form errors and then test [error feedback](#) using the **WAVE browser extension**.
-  - Descriptions and inline error messages are associated to the correct form control using [aria-describedby](#).

Tables



WAVE

web accessibility evaluation tool

wave.webaim.org

Evaluate headings, regions/landmarks, and page title

WAVE “Structure” tab

Lists

- Content presented visually as a list must be marked up as a list
- We recommend choosing the right list type for the content
 - ``/Numbers for sequence or hierarchy
 - ``/Bullets for parallel or equal importance
 - `<dl>` for “name/value pairs” (e.g., FAQ or glossary)

EASY SHORTBREAD



Ingredients

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

Directions

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

Baking Terms

Softened butter

Butter left at room temperature for approximately 20 minutes.

Cream butter and sugar

Mix butter and sugar together until it is light and fluffy.

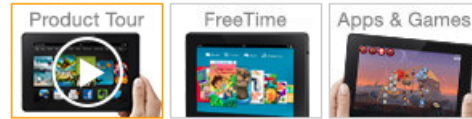


Kindle Fire HD

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](#)

Meaningful link text

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

Tables

Data tables

Class Schedule

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

Parts of accessible tables

1. Caption (if present)	<code><table></code> <code><caption>Class Schedule</caption></code> <code><tr></code>
2. Headers	<code><th scope="col">Class Name</th></code> <code><th scope="col">Course Number</th></code> <code><th scope="col">Location</th></code> <code></tr></code>
3. Scope	<code><tr></code> <code><th scope="row">Advanced Website Development</th></code> <code><td>BIS 5650</td></code> <code><td>B105</td></code> <code></tr></code> <code>...</code>

Caption, headers, and scope applied

Class Schedule

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

Table example

Spanned cells and multiple header levels

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

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

Fall Semester

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

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

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

The diagram illustrates the scheduling of two courses, BIS 5650 and BIS 3330, across two semesters. In the Fall Semester, BIS 5650 is offered in B105 and BIS 3330 is offered in B220. In the Winter Semester, BIS 5650 is again offered in B105 and BIS 3330 is offered in B220. Yellow arrows point from the course numbers in the Fall semester to the corresponding course numbers in the Winter semester, indicating that the same courses are offered in both semesters.

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

Language

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



Language of Page (Level A)

```
<html lang="en">
```

[WebAIM language article](#)

Language of Parts (Level AA)

`<option>Japanese</option>`

vs.

`<option lang="ja">日本語</option>`

Alternative Text

WCAG SC 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...**”

Alternative text best practice

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

"Alt" text

- Usually refers to the ``
 - Read by screen readers
 - Alternative to images if they are disabled or not supported
 - Used by search engines
- Is often used as a generic term for text alternatives

Alternative text for this image?





“The University of Utah”

Context/Surroundings can impact alternative text

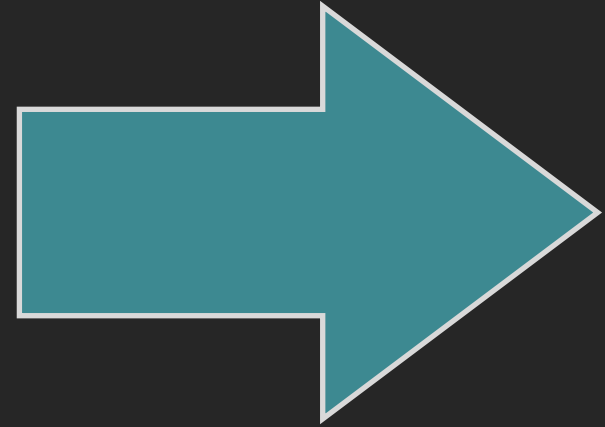


Notable WCAG SC 1.1.1 “Exceptions”

- Controls, Input
- Test
- Sensory
- Decoration, Formatting, Invisible

“Controls, Input”

“If non-text content is a control or accepts user input, then it has a name that describes its purpose.”



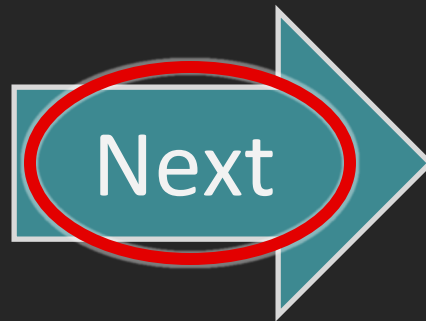
~~alt="Right-pointing arrow"~~

alt="Next"

“Label” and “Name” in WCAG

- The **Label** is visually presented
- The **Name** is presented to assistive technology
 - Also called “accessible name”
 - May be visually hidden

What is the WCAG “Label”?



What is the WCAG “Name”?



Explore with:

- Screen reader
- WAVE “Order” tab
- HTML inspector

Test Name with WAVE Order tab

Follow NASA



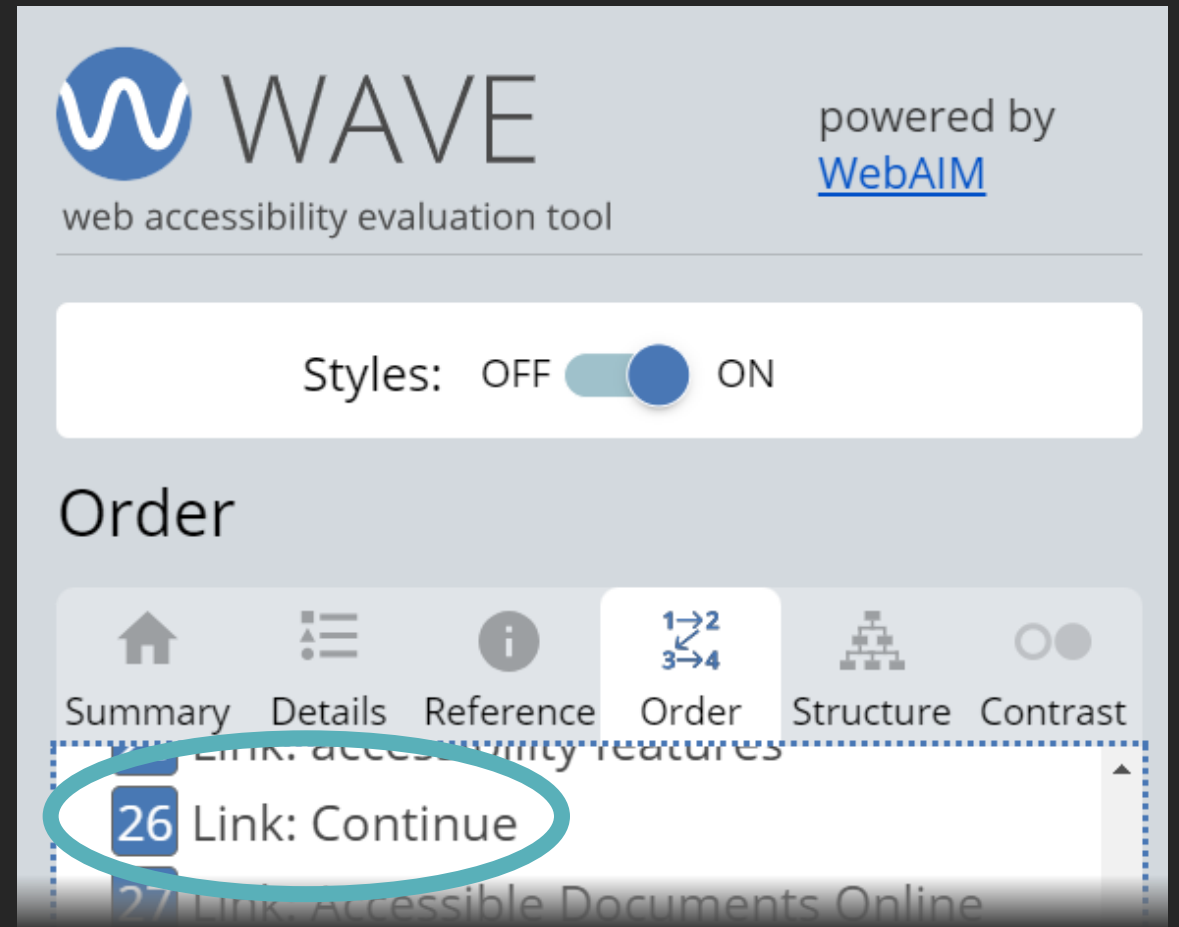
More NASA Social Accounts

NASA Newsletters

A screenshot of a WAVE accessibility tool interface. The top navigation bar includes icons for home, menu, info, order, structure, and contrast. The 'Order' tab is selected and highlighted. Below the navigation bar, a list of 16 items is displayed, each with a blue square containing a number and a text description. The items are: 25 Link: Humans in Space, 26 Link: Earth & Climate, 27 Link: The Solar System, 28 Link: The Universe, 29 Link: Science, 30 Link: Aeronautics, 31 Link: Technology, 32 Link: Learning Resources, 33 Link: About NASA, 34 Link: NASA en Español, 35 Link: NASA on Facebook, 36 Link: NASA on Instagram, 37 Link: NASA on X, 38 Link: NASA on YouTube, 39 Link: *NO ACCESSIBLE NAME*, and 40 Link: More NASA Social Accounts.

Order	Link
25	Link: Humans in Space
26	Link: Earth & Climate
27	Link: The Solar System
28	Link: The Universe
29	Link: Science
30	Link: Aeronautics
31	Link: Technology
32	Link: Learning Resources
33	Link: About NASA
34	Link: NASA en Español
35	Link: NASA on Facebook
36	Link: NASA on Instagram
37	Link: NASA on X
38	Link: NASA on YouTube
39	Link: *NO ACCESSIBLE NAME*
40	Link: More NASA Social Accounts

Fails WCAG “Label in Name”



WAVE
web accessibility evaluation tool

powered by [WebAIM](#)

Styles: OFF ON

Order

Summary Details Reference Order Structure Contrast

26 Link: Continue

27 Link: Accessible Documents Online

Passes WCAG: Label *in* the name



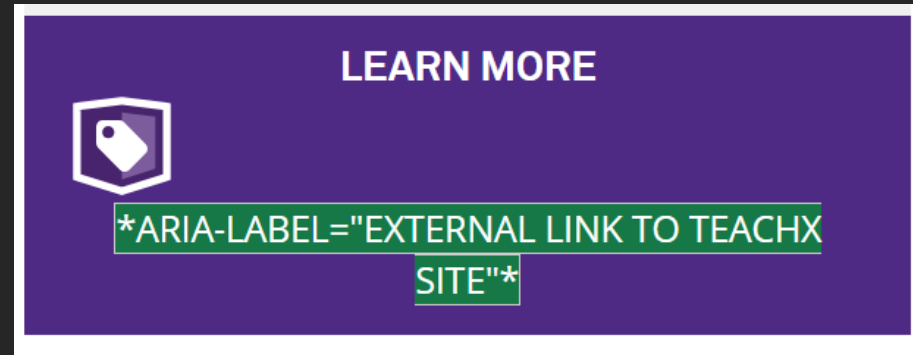
```
alt="Next page"
```

Even better: Label and name match



```
alt="Next"
```

ARIA labels override the accessible name



```
<a aria-label="External link to TEACHx site"...>  
Learn More  
</a>
```

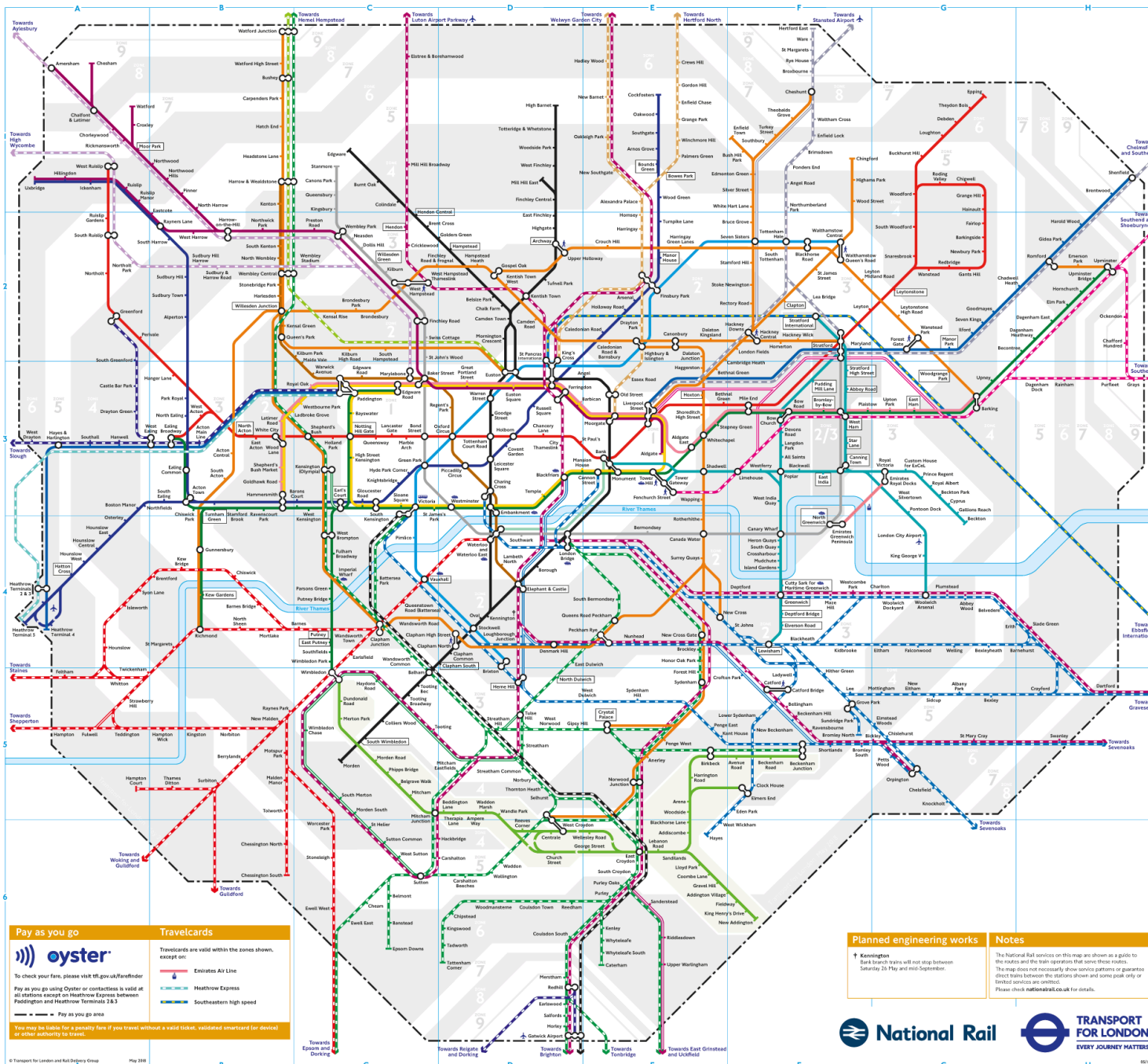
Also applies to alternative text, button text, etc.

Test

“at least provide descriptive identification of the non-text content”

1. What is the name of this painting?

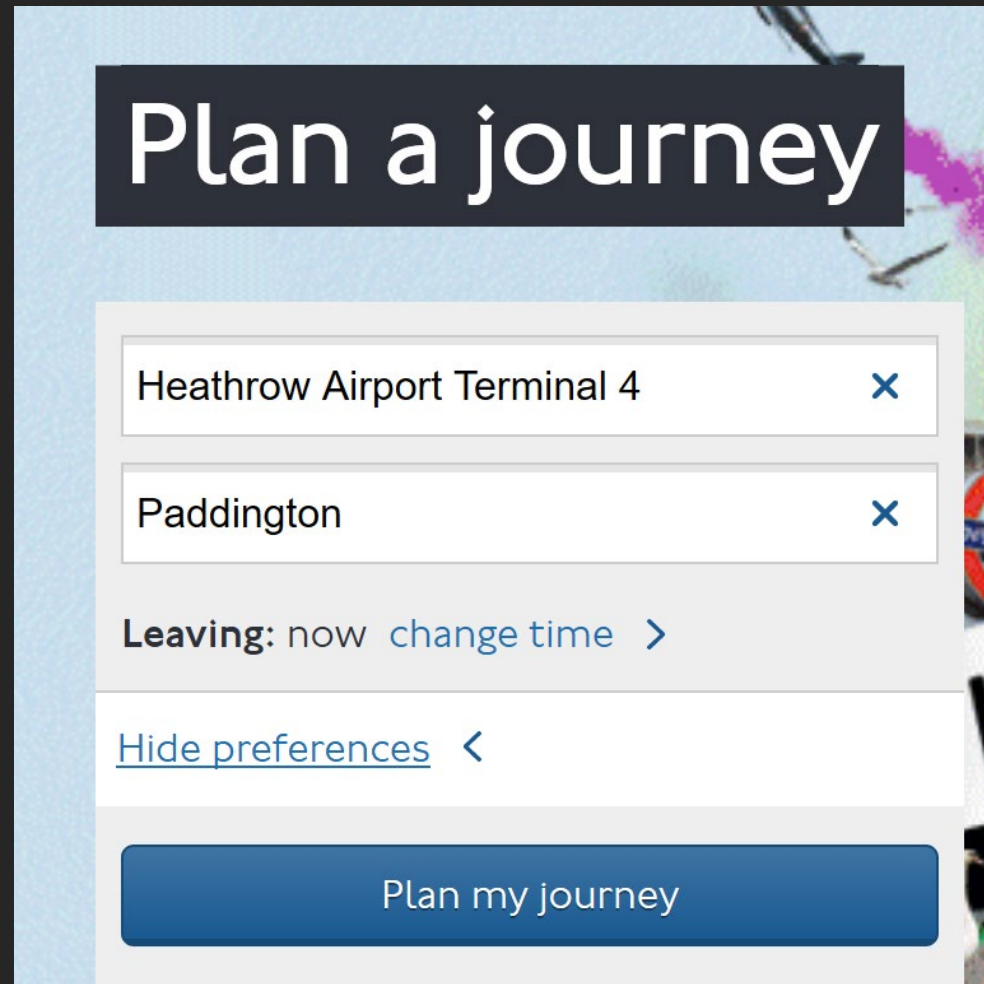




Sensory

“If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.”

Equivalent *experience*



Plan a journey

Heathrow Airport Terminal 4 ×

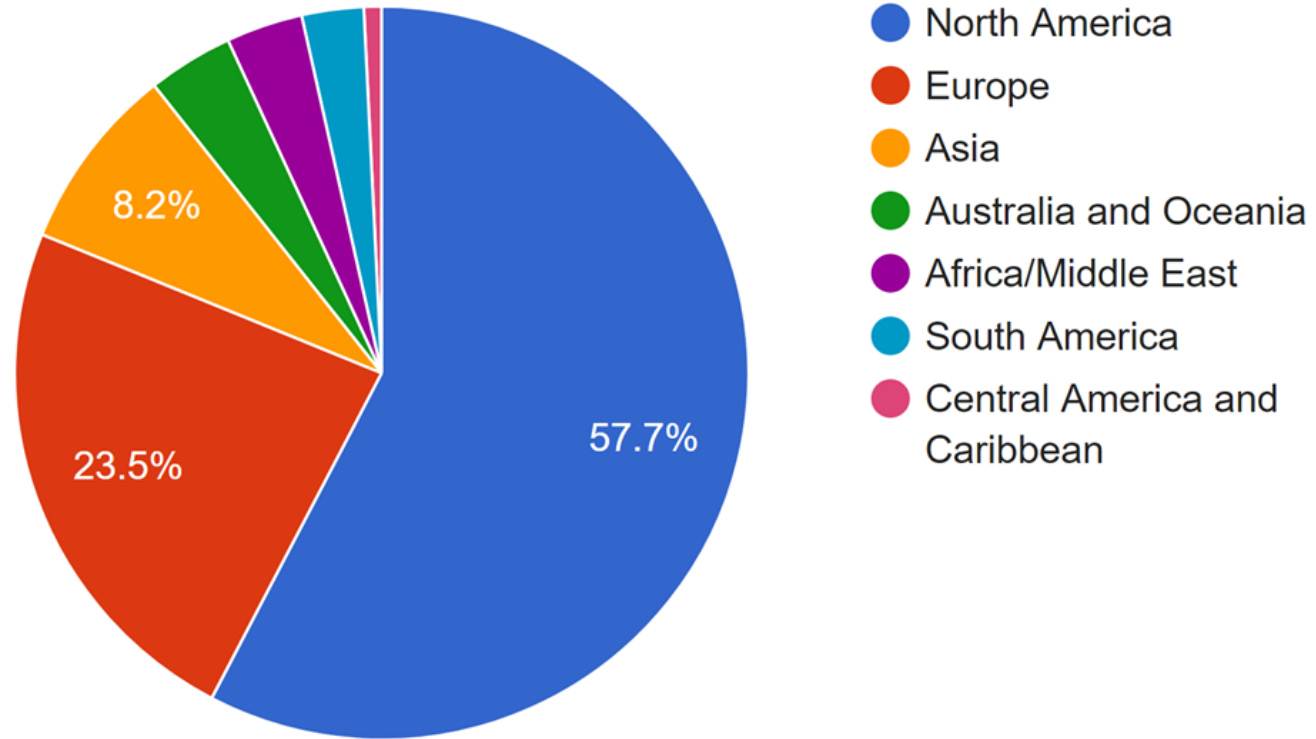
Paddington ×

Leaving: now [change time](#) >

[Hide preferences](#) <

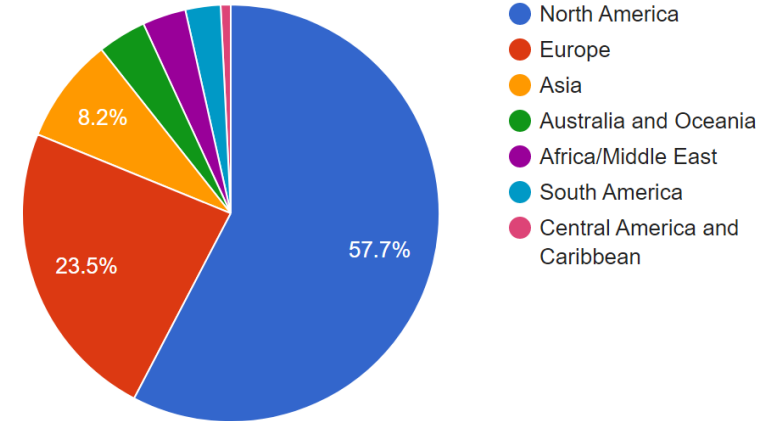
[Plan my journey](#)

Charts and data



Alt text + description

1. Give the image succinct alternative text
2. Provide a detailed description
 - In context **OR**
 - Link to the information



Respondent Region

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

Org Charts



Staff	Division/Team	Position	Reports to
Dr. Wappett	Administration	IDRPP Director	CEHS Dean Al Smith
Richard Jewkes	Administration	Director	Dr. Wappett
Dr. Tim Riesen	Research & Training	Director	Dr. Wappett
Nancy Strahan	Research & Training	Associate Director	Dr. Riesen
Dr. Curt Phillips	Services	Director	Dr. Wappett
Dr. Tressa Johnston	Services	Associate Director	Curt Phillips
Norm Ames	Technical Assistance	Director	Dr. Wappett
Jared Smith	Technical Assistance	Associate Director	Norm Ames

Decoration, Formatting, Invisible

“If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.”

`alt=""` →



Empty vs. Missing alt text

- Empty alt (`alt=""`) is a statement:
 - The image is decorative, or
 - Alternative text is nearby
- Missing alt is ambiguous
 - Screen readers may or may not treat it the same as `alt=""`
- Content tools (e.g., WordPress and Word) should have a way to identify decorative images

Evaluate alternative text

- Use WAVE to find image alt text
- Search for other images that do not have WAVE icons
- Use WAVE “Order” Tab for interactive images
 - Look for the “name”

Forms

Forms – Best Practice

- Use HTML `<input>` types, when possible
 - Native accessibility is usually better (e.g., `color` and `range`)
- Help users avoid errors
 - Clear labels and instructions
 - Accessible names
 - Only collect necessary information
- Help users correct errors
 - Identify errors and suggest corrections

The image shows a user interface for selecting a foreground color. It is titled "Foreground" and contains the following elements:

- A "Hex Value" input field containing the text "#0000FF".
- A "Color Picker" consisting of a horizontal bar with a blue gradient.
- An "Alpha" input field containing the number "1".
- A "Luminance" slider with a dark blue gradient and a white handle.

<label> element

First Name:

Usually provides the “label” and “name”

```
<label>First Name:  
  <input type="text">  
</label>
```


<fieldset> and <legend>

Foreground

Hex Value

#

Color Picker

Alpha

Luminance

```
<fieldset>  
  <legend>Foreground </legend>  
  ...  
</fieldset>
```

Evaluate forms and labels

Low Vision

1.4.5 – Images of Text (AA)



Browser Zoom

- Browser controls
 - Larger: Ctrl/command & +
 - Smaller: Ctrl/command & -
 - Reset : Ctrl/command & 0
- Zoomed content should “respond” and show mobile version
 - Many/most users are on mobile devices

Evaluate page zoom

- Ctrl/command & +, -, 0
- Set 1280px width and zoom to 400%
 - Any horizontal scrolling?
- Test the mobile menu

Contrast and Color

[WebAIM contrast article](#)

How many contrast and color checks?

I have read and agree to the [Terms of Use](#)

15 or more

Evaluating Color and Contrast – How hard can it be?

21:1

21:1

Text Contrast (AA)

4.5:1

Gray on White

Purple on White

Red on Yellow

3:1 – “Large Text”

≥18pt (24px)

BOLD: ≥14pt (18.67px)

“Images of text”

50 most played
songs by genre



“Logotypes” exception

50 most played
songs by genre



A serene winter landscape featuring a snow-covered field with several trees heavily laden with snow. The sky is bright and clear, suggesting a sunny day. The overall scene is peaceful and picturesque.

This text is hard to read
and it fails WCAG

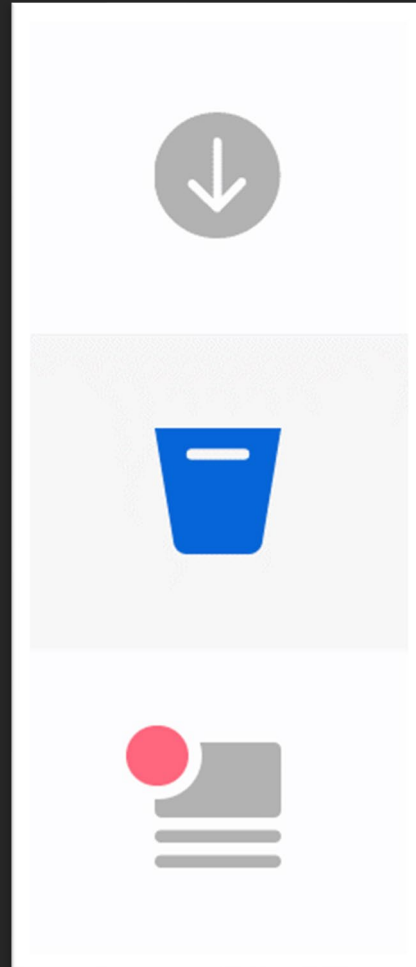
A serene winter landscape featuring a snow-covered field with several small, snow-laden evergreen trees. The sky is a pale, bright blue, suggesting a clear day. The overall scene is peaceful and cold.

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

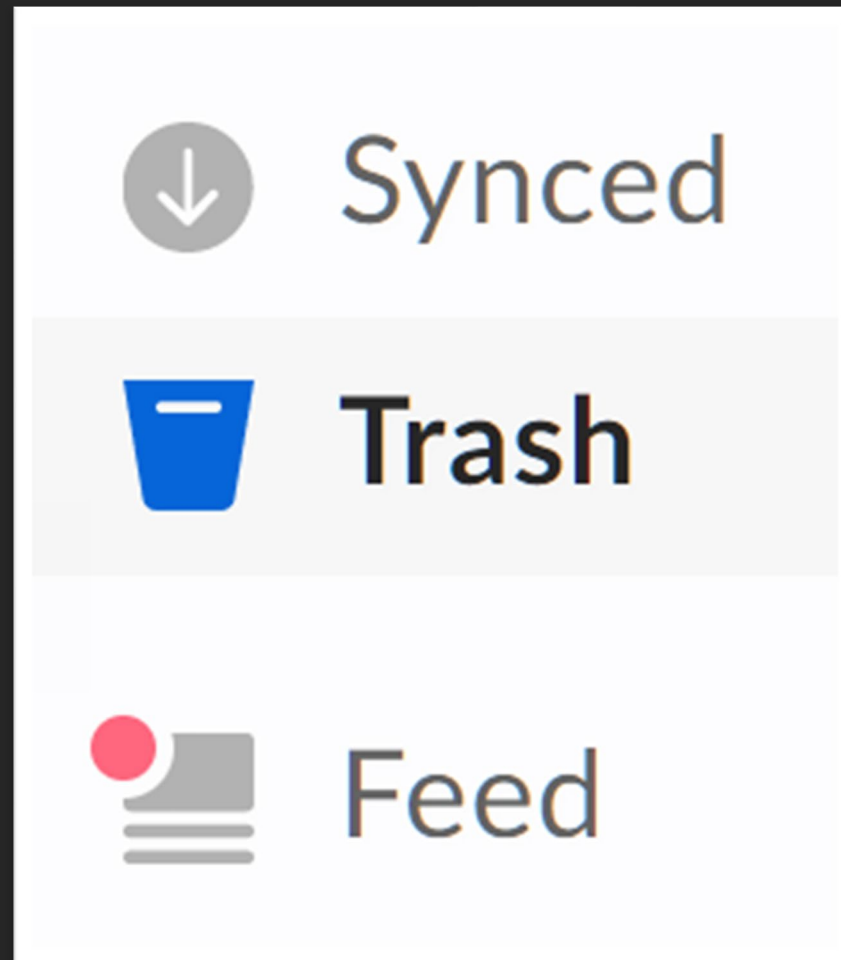
WebAIM Contrast Checker

webaim.org/resources/contrastchecker/

3:1 Contrast of “Graphical Objects”



“...required to understand”



“Against adjacent color(s)”



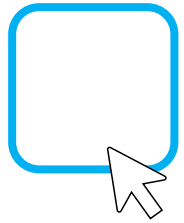
Add a border



3:1 Contrast – “Identify user interface components”

I have read and agree to the [Terms of Use](#)

You must test contrast of different states



I have read and agree to the [Terms of Use](#)



I have read and agree to the [Terms of Use](#)

WCAG 2.0 – Keyboard focus is visible

But there is no minimum contrast level

WCAG 2.1 – 3:1 contrast of keyboard focus indicators



Follow your interests.

1.4.1 – Use of Color (A)

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

- Amanita
- Chanterelle
- Porcini
- Shiitake
- Tylopilus

How can we fix this?

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

- Amanita
- Chanterelle
- Porcini
- Shiitake
- Tylopilus

Icons (with alternative text)

- Amanita 
- Chanterelle
- Porcini
- Shiitake
- Tylopilus 

Separate lists

Safe

- Chanterelle
- Porcini
- Shiitake

Poisonous

- Amanita
- Tylopilus

Bold or Italicized text?

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

Reinforce information with color

IT SERVICE STATUS

 **Minor Service Outage**

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

You must agree to the **Terms of Use**

You must agree to the Terms of Use

Requirements for links that rely on color

1. A 3:1 contrast ratio between link text and non-link text
2. Link must present a non-color cue (typically underline) on keyboard focus
 - Mouse hover also recommended
 - Not possible in most electronic documents (e.g., Word and PowerPoint)

You must agree to the **Terms of Use**

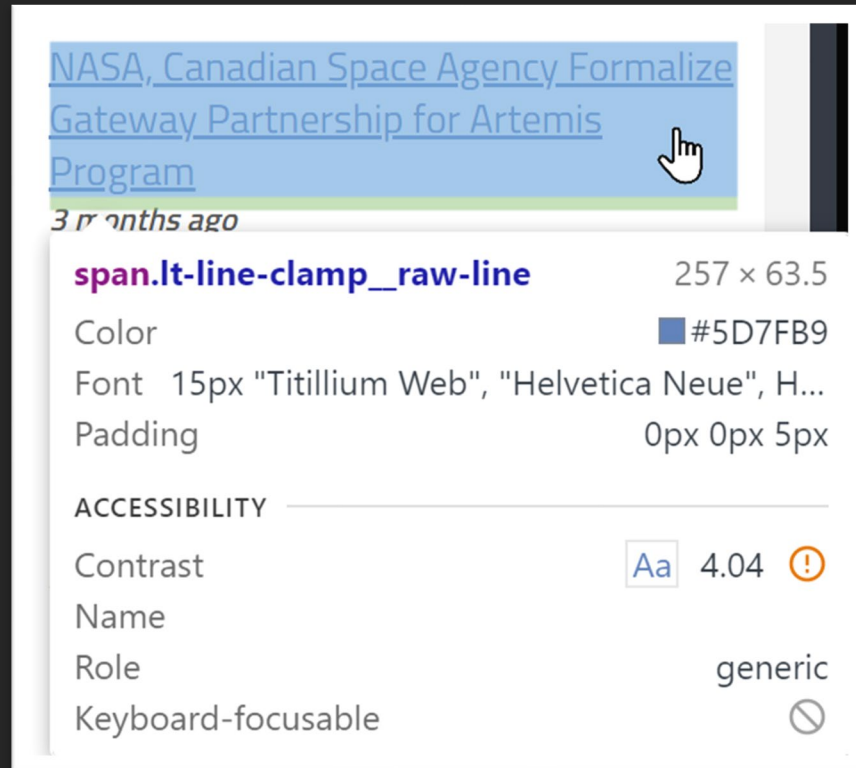
webaim.org/resources/linkcontrastchecker

You must agree to the [Terms of Use](#)

You must agree to the [Terms of Use](#)

and link becomes underlined on focus/hover

Chrome Developer Tools



NASA, Canadian Space Agency Formalize Gateway Partnership for Artemis Program

3 months ago

span.lt-line-clamp_raw-line 257 × 63.5

Color #5D7FB9

Font 15px "Titillium Web", "Helvetica Neue", H...

Padding 0px 0px 5px

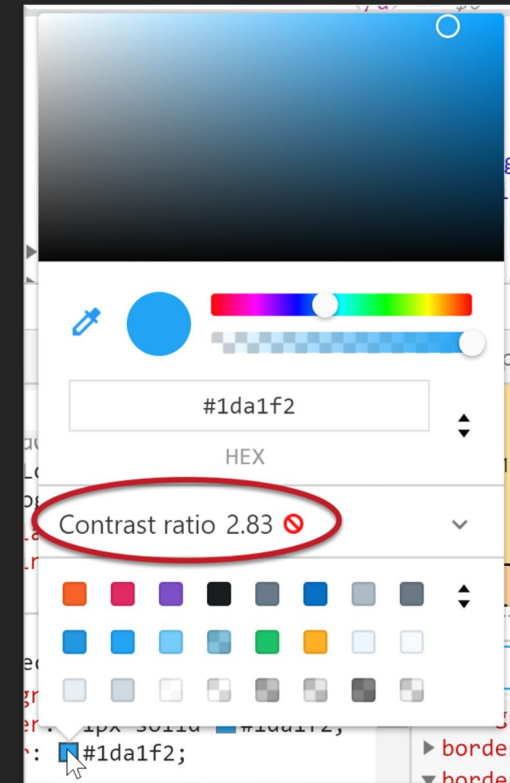
ACCESSIBILITY

Contrast Aa 4.04 ⚠

Name

Role generic

Keyboard-focusable



#1da1f2

HEX

Contrast ratio 2.83 ⚠

#1da1f2;

border

Evaluating contrast with Chrome DevTools

Evaluate contrast and color use

1. WAVE contrast tab – Automatically-detected text
2. WebAIM contrast checker – Eyedropper, slider
3. Chrome DevTools – Mouse inspector, toggle states (e.g., hover)

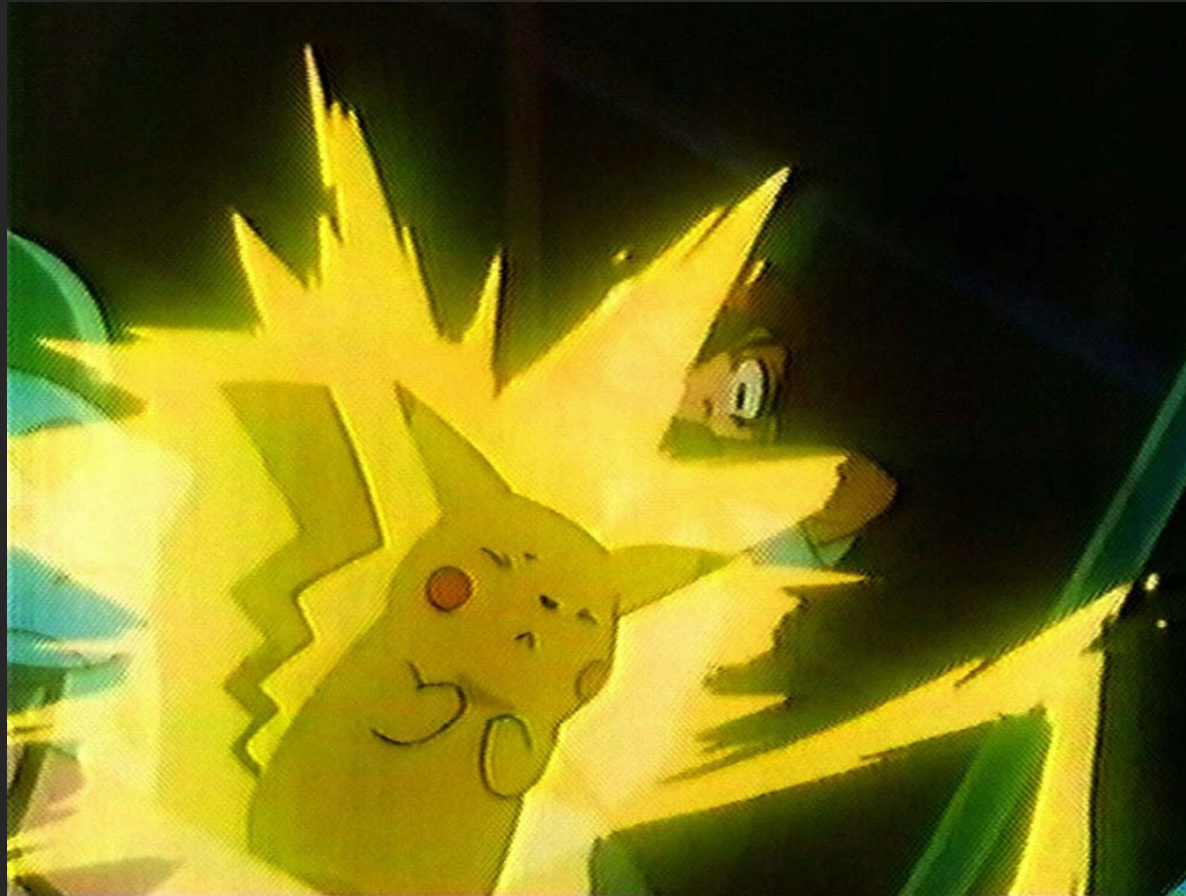
Multimedia

Multimedia accessibility requirements

- Captions required for multimedia
 - Automatic captions continue to improve, but are they good enough?
- Audio descriptions for important visual-only content
- Descriptive transcripts for audio-only content
 - Recommended for multimedia



Caution with flashing/strobing content



Cognitive/Learning Disabilities

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

Make Content “Understandable”

- Be consistent
 - “Consistent Navigation”, “Consistent Identification”
 - “Consistent Help” (WCAG 2.2)
- Use plain language
 - “readable to users with a lower secondary reading level” (WCAG AAA)
 - Write for your audience
- Be careful with movement and other distractions

There must be a way to pause/stop/hide moving content that:

1. Starts automatically
2. lasts more than five seconds,
3. *and* is presented in parallel with other content.

E.g., [Carousels](#)



Legible Text

- Small text negatively impacts readability
 - WCAG has no text size requirements
- Avoid long line lengths
 - Consider line height/spacing
- Choose legible fonts

Motor Disabilities

Pointing Devices & Voice Control

- Mouse users and touchscreen users
 - Less dexterity – Don't require gestures or motions (e.g., swipe)
 - Tremors – Respond to lifting up, not pressing down.
 - Chronic pain – Reduce steps
- Assistive technologies that behave like a mouse
 - E.g., Eye tracking
- Voice Control

Target size bookmarklet

The screenshot shows the WebAIM website interface. At the top left is the WebAIM logo with the tagline "web accessibility in mind" and a head-and-gears icon. To the right is a navigation menu with links for "services", "articles", "resources", "projects", and "community". Below the navigation is a search bar and three featured article links: "Introduction to Web Accessibility", "WebAIM Training", and another "Introduction to Web Accessibility". The main content area features a large image of a woman reading a book on a bench. Below the image is the article title "Introduction to Web Accessibility" and a breadcrumb trail: "Home > Articles > Introduction to Web Accessibility". The article content includes a table of contents with links to "Introduction", "People with Disabilities on the Web", "Implementing Web Accessibility", "Principles of Accessible Design", and "Conclusion". On the right side, there are three utility boxes: "Last updated: Apr 14, 2020", "Translations" (with a Russian translation by EduTranslator), and "Related Resources" (listing links like "Constructing a POUR Website", "Visual", "Hearing", "Motor", "Cognitive", "Seizure", and "Design Considerations").

WebAIM
web accessibility in mind

services articles resources projects community

Search:

Introduction to Web Accessibility

WebAIM Training

Introduction to Web Accessibility

Home > Articles > Introduction to Web Accessibility

Last updated: Apr 14, 2020

Translations
Russian by EduTranslator

Article Contents

- Introduction
- People with Disabilities on the Web
- Implementing Web Accessibility
- Principles of Accessible Design
- Conclusion

Introduction

Most of us can hardly conceive of life without the internet. Some have argued that no other single invention has been more revolutionary since Gutenberg's

Related Resources

- Constructing a POUR Website
- Visual
- Hearing
- Motor
- Cognitive
- Seizure
- Design Considerations

Keyboard users

- Most keyboard users also use other technologies
 - Screen readers users
 - Users who find a pointing device less efficient, more difficult, or painful
- Can users identify which item has keyboard focus?
- Is keyboard navigation intuitive and efficient?



≠ Touch Only

Use Standard Keyboard Commands

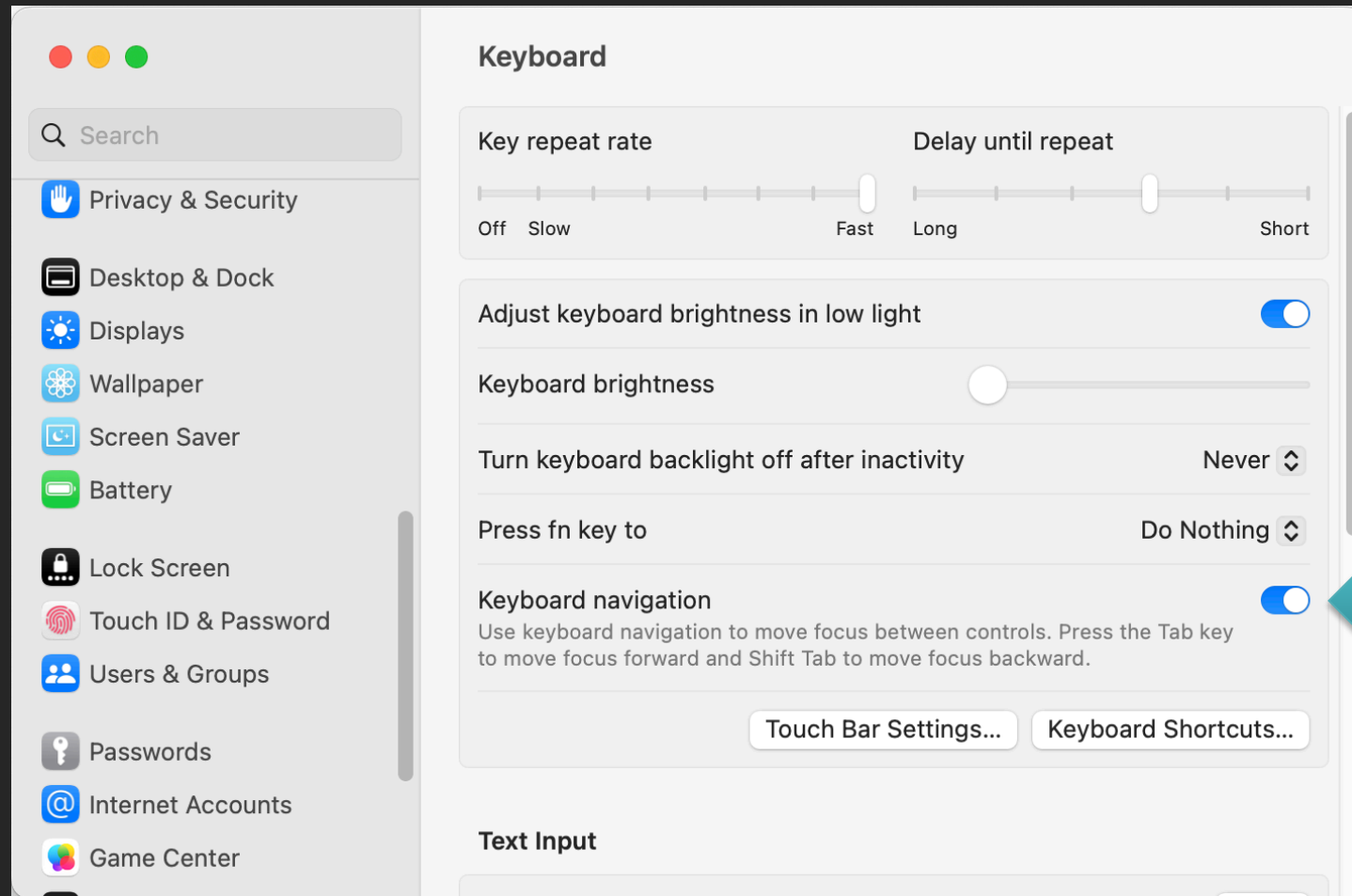
- **Tab, Shift + Tab:** Navigate
- **Enter:** Activate (e.g., link)
- **Spacebar:** Press or toggle (e.g., buttons/checkbox)
 - Otherwise, scroll the page
- **↑/↓ or ←/→:** Move within a “tab stop” (e.g. radio buttons)
- **Esc:** Close/Collapse

[E.g., WebAIM Form Controls article](#)

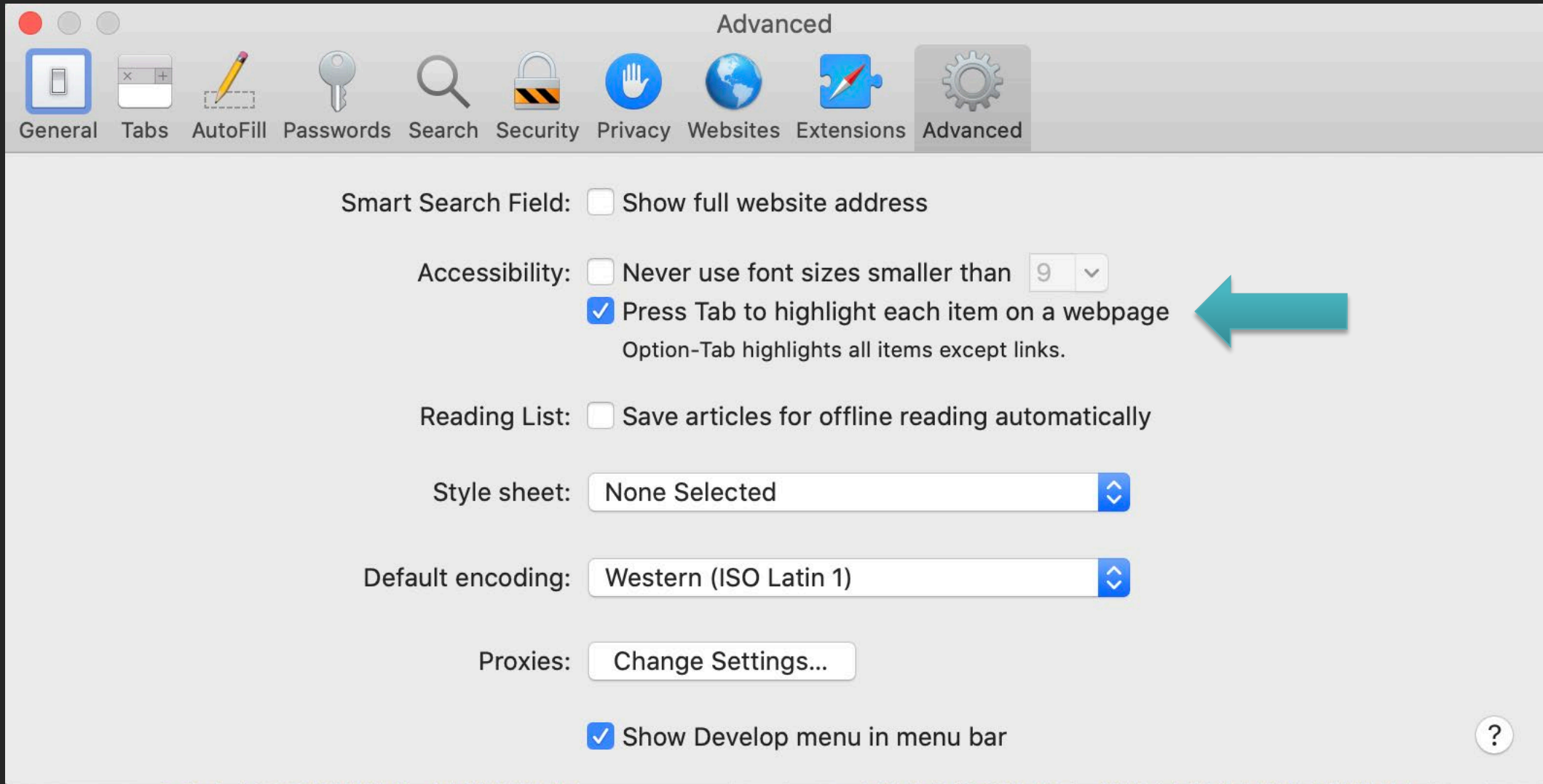
Follow design patterns for custom widgets

[ARIA Authoring Practices Guide \(APG\)](#)

Some tweaking required on Mac



Safari Keyboard Settings



Evaluate keyboard accessibility

Navigate the site using only the keyboard (Tab, Shift + Tab, Enter, Space, ↑/↓ or ←/→, Esc).

- Is there a clear keyboard focus indicator?
- Is all functionality available?
 - How about responsive layouts?
- Is navigation order logical?
 - WAVE “Order” tab

PDF accessibility

Preferred Formats for Electronic Content

HTML > PDF > Doc/PPT >
Google Docs > Other formats

...except PPT exported slides, then PDF is usually better than HTML



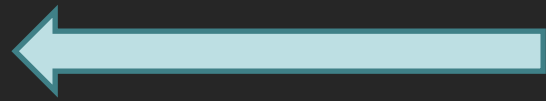
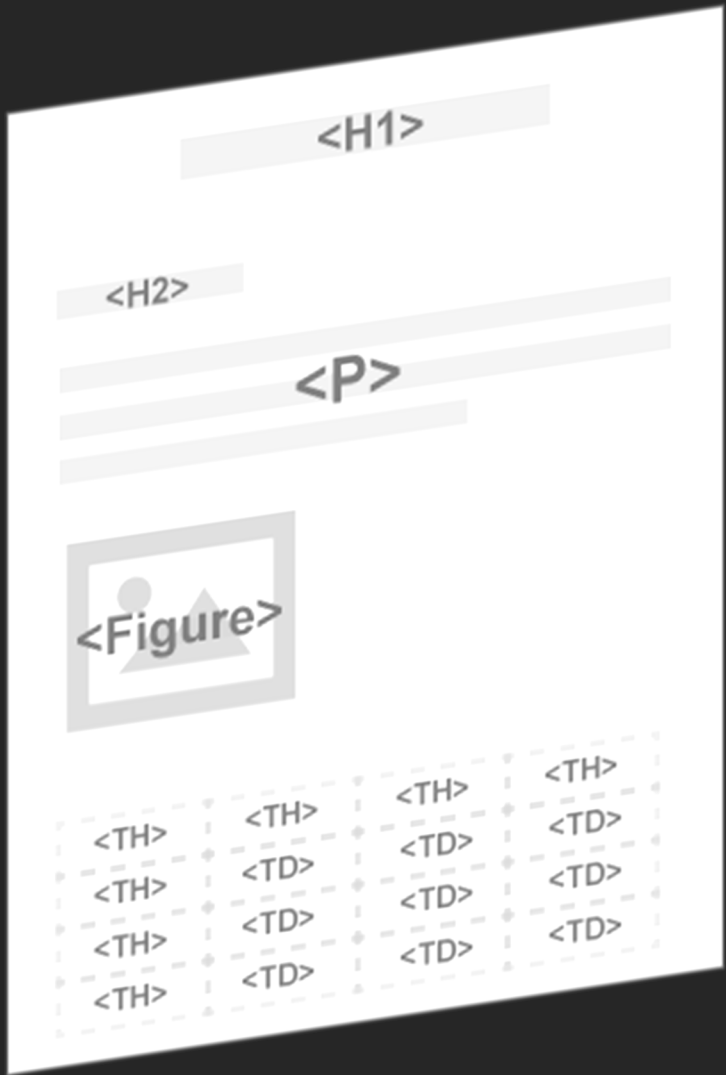
3 PDF “layers”



Visual



Content

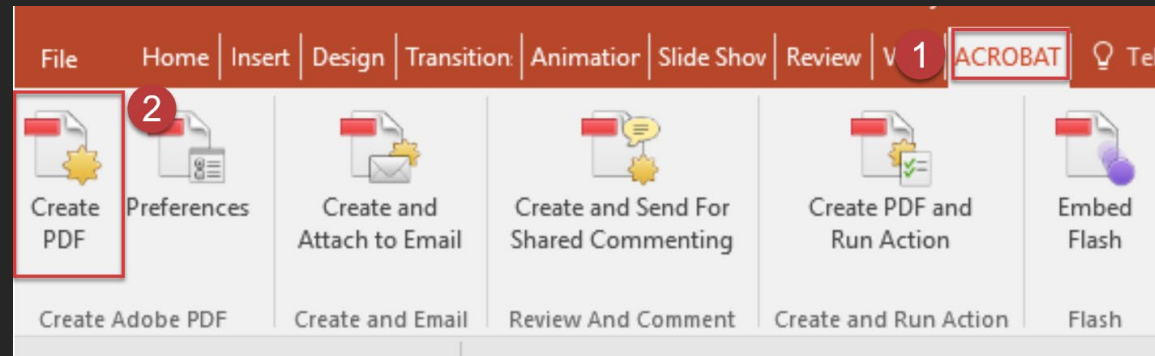


Tags

PDF Conversion

- Word & PowerPoint – Great accessibility
- InDesign – Good accessibility but it takes effort
- Canva – Inconsistent results
- Google Docs – No tags
- Print – No tags

Use the Acrobat Tab in Office



(“Save As” > PDF is the next-best option)

In their own words

Many users with disabilities have expressed strong words of dissatisfaction with overlay products. As shown below, overlays themselves may have accessibility problems significant enough for users to take steps to actively block overlays from appearing at all.

Please note: while this section may mention specific vendors, these comments are par-for-the-course when it comes to the user experience provided by overlay widgets which have, in themselves, a pattern of negatively impacting the user experience.

...assuming your tool can do a good job making something accessible, it can do an even better job making something accessible running directly on the user's machine having access to machine code and machine APIs

[DerekRiemer](#)

...I finally managed to gain access to my @NameCheap account by blocking #AccessiBe in my Windows Hosts file. I should not need to do this to use the Internet. AccessiBe needs to AccessiBeGone

[WilfSplodNokit](#)

...I know with 100% certainty, any site which has deployed an overlay in the past year and a half has been less useable for both my wife and me—both blind.

[GeauxEnder](#)

...Still a pain to even try reading the article on a mobile device because of the constant interruption every few seconds. Considering every site using your service also has this problem...
Nope.

[Big_D01](#)

...Making a webpage accessible does take work, and simply telling a business they can install your plugin is absolutely foolish, you build, and design accessibility in to a webpage using WCAG standards.

[w9fyi](#)

...Suggesting one line of code is cheap so you should do it by inference suggests disabled lives aren't worth investing in either.
#a11y

[Kevmarmol_CT](#)

[Overlayfactsheet.com](https://overlayfactsheet.com)

Thank You!

Services

- Training
- Evaluation
- Consultation
 - System-wide coordination

Resources

- E-mail discussion list
- Monthly newsletter
- Articles and resources
- WebAIM conference