

Accessibility 101 General Overview



NWESD 189 Staff

✓ David Forsythe, Assistant Superintendent of Operations

✓ Jessica Haag, Communications Specialist

✓ Kyle Bunker, Technology Services Director

✓ Kyann Flint, Guest Disability Advocate



Disclaimer

- ✓ This presentation does not replace legal advice
- We will not tell you "how to" fix your website, but we will review guidelines and share information we've gathered
- \checkmark We will try to point you in the right direction



Agenda

 Regulations
 Disabilities & Assistive Technology ✓ Guidelines Process to Improve ✓ Questions ✓ Link to resources



Section 1: Why?

- ✓ It's the right thing to do!
- It's just as important to have an accessible website as having a ramp or an ASL interpreter for a meeting
- Federal Law
- ✓ State Law
- Districts are receiving Office of Civil Rights Complaints against their website accessibility



National Statistics on Disabilities

56.7 million people in the US have a disability

That's **19%** of our entire population!





8.1 million of those are visually impaired

7.6 million of those are hearing impaired





Washington State Statistics on Disabilities



911,800 (12.8%) of non-institutionalized people have a disability
283,900 (4.0%) have a disability type of hearing impaired
162,800 (2.3%) have a disability type of visually impaired
440,900 (6.6%) have a disability type of ambulatory (serious difficulty walking or climbing stairs)
147,000 (13.5%) WA State students have an Individualized Education Plan (IEP)
33,000 (3.1%) WA State students have a Section 504 Plan



Risk Management

Generally there is:

- Coverage for Special Education Claims
- Exclusions for relief or complaints filed with local, state or federal administrative body such as Human Rights Commission, OSPI, EEOC
- Exclusions for compliance with ADA act of 1990- won't cover cost or expenses to make premises accessible

 But always check with your District Risk Manager or your Risk Management or Insurance Provider for details on your Coverage Agreement



Regulations

- ✓ Rehabilitation Act of 1973
 - ✓ Section 504
- ✓ Title II of Americans with Disabilities Act (ADA) (1990)
- Rehabilitation Act: Section 508 (2000)
- ✓ Washington State Law against Discrimination (RCW 49.60.010)



Section 508 (Revised 2017)

- ✓ Effective January 18, 2018
- Safe Harbor: "legacy (websites, web-based applications, and electronic documents) ICT that complies with the existing 508 Standards and has not been altered after the compliance date (i.e., one year after publication of the final rule) need not be modified or upgraded to conform to the Revised 508 Standards. However, when existing ICT is altered after the compliance date, such alterations must comply with the Revised 508 Standards."



Ms. Wheelchair of Washington State

- Kyann Flint, Disability Advocate: Squalicum High School, Bellingham Washington & Western Washington University
- <u>https://www.facebook.com/Ms.WheelchairWa/?fr</u> <u>ef=ts</u> Facebook: @Ms.WheelchairWA
- https://www.linkedin.com/in/kyann-flint-8a498288/



Northwest Educational Service District 189 Together We Can

✓ Twitter: @kyann_flint

Disability Types

Visual
 Low Vision
 Color Blind
 Hearing
 Motor Skills
 Cognitive
 Aging can contribute





Assistive Technology

Screen Readers ✓ Magnifiers ✓ Special Keyboards ✓ Voice Control ✓ Mobile Devices ✓ Search Engines Captioning



Questions?



Section 2: Guidelines

What needs to be accessible?
 Design & Flow
 WCAG
 Perceivable
 Operable
 Understandable
 Robust



"Accessibility isn't a niche issue; it's an everyone issue."

- Eleanor Ratliff, Smashing Magazine



Thinking about design & flow:

Examples:

Low vision = usually works well on small screens
 Cognitive issues = better site flow overall
 Focusing on good design will actually help to create sites that are better for everyone.



"You never really understand a person until you consider things from his point of view...until you climb into his skin and walk around in it."

- Harper Lee, To Kill a Mockingbird



First-hand experience

 ✓ Straw test – low vision
 ✓ Enlarge your fonts – low vision
 ✓ Check for sufficient color contrast – low vision <u>http://webaim.org/resources/contrastchecker/</u> Search for: High Contrast Extension
 ✓ Pencil test/go mouse less – mobility issues



Questions?







Web Accessibility Guidelines

- The official guidelines are outlined in the Web Content Accessibility Guidelines 2.0 AA (WCAG)
- Established by the Accessibility Initiative of the World Wide Web Consortium (W3C)
- ✓ Three levels of accessibility: A, AA, AAA
- Web Accessibility Initiative Accessible Rich Internet Applications (WAI – ARIA)
- Four key principles: POUR (Perceivable, Operable, Understandable, Robust)





Accessible Rich Internet Applications

HTML5 Element ARIA Role <article> "article" <footer> "conetentinfo" <header> "banner" <nav> "navigation" <section> "region" <main> "main"





- ✓ **Perceivable** (users need to be aware of web content)
- Operable (users need to be able to navigate, find and interact with website content)
- Understandable (users need to be able to comprehend all navigation, interaction and content)
- Robust (enable users to choose technologies to meet their needs)



1. Perceivable





Guideline 1.1 Text Alternatives:

Provide text alternatives for any non-text content This includes: Images, forms/buttons, embedded multimedia, frames

Be accurate
Be concise
Do NOT be redundant
Do NOT use the phrases "image of ..." or "graphic of ..." to describe the image



Guideline 1.1 Text Alternatives:

Provide text alternatives for any non-text content This includes: Images, forms/buttons, embedded multimedia, frames

Images and Text-to-Speech example:

Image with text

What is Read:



"link graphic [filename]"



Guideline 1.1 Text Alternatives:

Provide text alternatives for any non-text content This includes: Images, forms/buttons, embedded multimedia, frames



What would be appropriate alternative text for the image

- 1. "Image of baby monkey"
- 2. "Little monkey, cutest animal on earth"
- 3. An empty alt attribute (alt="")
- 4. "Baby monkey"
- 5. It depends on the context



Guideline 1.2 Time-based Media:

Provide alternatives for time-based media (<u>example</u>)

Captions, transcripts, audio descriptions, audio for video content

- Synchronized the text content should appear at about the same time that audio would be available
- Equivalent content provided in captions should be equivalent to the words spoken
- Accessible caption content should be readily accessible





Guideline 1.3 Adaptable:

Create content that can be presented in different ways (ex: simpler layout) without losing information or structure.

Semantic markup

✓Tables

Reading and navigation order



Source: http://webaim.org/standards/wcag/checklist

Semantic Markup

<h1>, <h2>, <h3>, ,

Source: http://webaim.org/standards/wcag/checklist





Shelly's Daughters		
Name	Age	Birthday
Jackie	5	April 5
Beth	8	January 14



Reading & Navigation Order

(determined by the code order) (<u>example</u>)

✓ Set document Language ex: using an "en" code for English

 Content Linearization: the page should have a linear progression in a step-wise manner (think about how an audio/screenreaders would navigate the page)

 Navigating Content (using the tab key, and links should make sense when read out loud)



Guideline 1.4 Distinguishable:

Make it easier for users to see and hear content including separating foreground from background



Color Checker (example) Level AA requires a contrast of 4.5:1 for normal text and 3:1 for large Text



Example: Low Vision





Take 5 minutes to look at your website

- Perceivable -


2. Operable





Guideline 2.1 Keyboard Accessible:

Make all functionality available from a keyboard

The following best practices can facilitate efficient keyboard navigation:

- Provide a <u>"skip to main content"</u> link on the page
- Use a proper heading structure
- Provide <u>ARIA landmarks</u> or HTML5 structural elements (<main>, <nav>, etc.) usable elements

KEYBOARD TESTING >>

Interaction	Keystrokes	Notes
Navigate to most elements	 Tab Shift + Tab - navigate backward 	 Keyboard focus indicators must be present. Navigation order should be logical and intuitive.
Link	Enter	
Button	Enter or Spacebar	Ensure elements with ARIA role="button" can be activated with both key commands.
Checkbox	Spacebar - check/uncheck a checkbox	Checkboxes should be used when one or more option can be selected.
Radio buttons	 ↑/↓ or ←/ → - select an option. Tab - move to the next element. 	Radio buttons should be used when only one option from a group can be selected.
Select (dropdown) menu	 navigate between menu options Spacebar expand 	You can also filter by typing letters, but this behavior varies by browser. Some will filter as you type, like autocomplete. Others will only sort by first letter. E.g., in a list of US States, hitting A then R may take you to A rizona, or it may take you to Alabama and then R hode Island.



Guideline 2.2 Enough Time:

Provide enough time to read and use content

"When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required"

- Web-based intranet & internet information & applications Section 508 Standards Guide

Source: http://webaim.org/standards/wcag/checklist



Guideline 2.3 Seizures:

Do not design content in a way that is known to cause seizures

WARNING personal susceptible to photoepileptic seizures should not follow these links

<u>A strobing, flickering image</u> <u>An optical illusion image</u>



Source: http://webaim.org/standards/wcag/checklist

Take 5 minutes to look at your website

- Operable -



3. Understandable





Guideline 3.1 Readable:

Make text content readable and understandable

Website copy

- ✓ Main titles should be in H1 headings, meaningful, and contain keywords
- ✓ Subheadings are in H2 heading, meaningful, and contain keywords
- ✓ Content is further divided into blocks or paragraphs constructed around a single major idea
- ✓ Write clearly using short sentences



Guideline 3.1 Readable:

Make text content readable and understandable

Website copy continued...

- ✓ Avoid acronyms and abbreviations; or explain them
- ✓ Avoid slang, industry jargon or marketing fluff
- ✓ Use active voice, use positive terms
- \checkmark Ensure that every word and paragraph is necessary
- ✓ Give direct instructions



Working with <u>hyperlinks</u>:

Website copy continued...

- Avoid 'click here', 'go', 'read more' or images as links as they do not make sense of context
- ✓ Create meaningful links within text
- ✓ Differentiate links by color and <u>underline</u>
- ✓ No more than 20 links on a page
- ✓ Use enough space between links



Guideline 3.2 Predictable:

Make Web pages appear in predictable ways

- For example, people who use screen magnifiers see only part of the screen at any point in time; a consistent layout makes it easier for them to find navigation bars and other components.
- Placing repeated components in the same relative order within a set of Web pages allows users with reading disabilities to focus on an area of the screen rather than spending additional time decoding the text of each link.
- Users with limited use of their hands can more easily determine how to complete their tasks using the fewest keystrokes



Guideline 3.3 Input Assistance:

Help users avoid and correct mistakes

Examples:

- ✓ Hiding optional form fields
- ✓ Labels or instructions are provided when content requires user input
- Input errors are automatically detected and the error is described to the user in text



Take 5 minutes to look at your website

- Understandable -



4. Robust



Source: http://webaim.org/standards/wcag/checklist

Guideline 4.1 Compatible:

Maximize compatibility with current and future user agents, including assistive technologies

Examples:

- Hiding optional form fields
- ✓ Labels or instructions are provided when content requires user input
- Input errors are automatically detected and the error is described to the user in text

Significant HTML/XHTML validation/parsing errors are avoided. Check at <u>http://validator.w3.org/</u>

Source: http://webaim.org/standards/wcag/checklist



Take 5 minutes to look at your website

- Robust -



BEFORE





Source: https://www.w3.org/WAI/demos/bad/before/home.html



BEFORE

AFTER





Sourcehttps://www.w3.org/WAI/demos/bad/before/home.html

Questions?



Section 3: Moving Forward

- Developing Awareness
- ✓ First Steps
- District Needs Assessment
- ✓ Prioritizing Work
- ✓ Resources
 - ✓ Regulations
 - ✓ Checklists
 - ✓ Tools
 - ✓ Other Resources



Developing Awareness:

- Communications Staff
 - ✓ web publishers
- ✓ Technical Staff
- Decision Makers
- Organizational Awareness
 - Teachers and Administrative Staff
 - ✓ Kent Video



First Steps

- ✓ Target High Traffic pages (Google analytics)
- ✓ Target Items that affect multiple resources
 - ✓ Themes & Style sheets
 - ✓ Templates
- ✓ Some accessibility is better than none (A-level)
 - ✓ Structured headings (in order)
 - ✓ Labels on form fields
 - ✓ Alternative text on images
 - Add captions to videos
- ✓ Test for color contrast
- Add contact information so visitors can request website information in an alternate format.



"If you experience difficulty with the accessibility of any web pages or documents on this website, please request this information in an alternate format. You may email the information requests directly to: <u>communications@nwesd.org</u> or call to request (360) 299-4000"



District Needs Assessment:

Let's make some lists

- 1. How does the district disseminate information?
 - ✓ Web sites (District, Schools, Teachers)
 - ✓ Videos
 - Forms (collecting data form Staff, Student, Community etc.)
 - ✓ Fliers (Word Docs, PDFs)
 - ✓ Calendars
 - ✓ Social Media
 - Teacher Parent Communications
 - ✓ School Messaging Services



Assessing Your District cont...

2. What applications are Students required to use?

- ✓ Web Applications
- ✓ Curriculum
- Learning Management Systems
- 3. What resources are teachers using in the classroom?
 - ✓ VCR Cassette
- 4. What resources are teachers recommending?
- 5. What resources are Staff required to use?



Now what?

The goal is that100% of your resources are accessible for everyone.
 Visual

- ✓ Low Vision
- ✓ Color Blind
- ✓ Hearing
- ✓ Motor Skills
- ✓ Cognitive
- ✓ Two main categories
 - ✓ Communications
 - Applications (web resources)



Prioritizing Work - Communications

✓ Is this a primary source of communications?

- ✓ How many people access the communications?
- ✓ Is there an alternate way to access the information?

✓ Is this communications accessible by someone who has:

- ✓ a visual impairment?
- ✓ a hearing impairment?
- ✓ a cognitive impairment?
- ✓ A physical impairment?





Prioritizing Work - Resources

✓ Is the resource required to use or recommended?

- ✓Who uses the resource?
- ✓How many people use the resource?
- ✓Is there their an alternative way that someone could access or input the information?
- ✓ Is this resources accessible by someone who has:
 - ✓a visual impairment?
 - ✓a hearing impairment?
 - ✓a cognitive impairment?
 - ✓ A physical impairment?



Quick Checks

How does the resource work with:

Pen Test/Mouseless
 Visual, Physical, Cognitive
 Small screen resolution
 Visual, Cognitive
 Sound turned off
 Hearing

- ✓Larger than normal font sizes✓Visual
- ✓ Black and white display
 ✓ Visual
- ✓Images turned off✓Visual



Best Practices

- ✓Form a Plan of Action
- Accessibility check points at key milestones
- ✓ User testing with people with disabilities across all devices
- ✓Accessibility is not an Add-On
 - \checkmark the best approach is to build in accessibility from the start
- ✓Make sure your vendors are on board
- Communicate with content creators

✓ Cheat sheets

Accessibility is a process and not a project and it is relevant throughout the lifetime of a website/application.



Resources - Regulations

✓ Rehabilitation Act: Section 508 (2017) website <u>https://section508.gov/</u>

Article about 508 refresh
<u>https://goo.gl/e53Qu3</u>

✓ Washington Office of CIO Policy 188
 <u>https://ocio.wa.gov/policy/accessibility</u>

Washington Office of CIO Policy 188.10 <u>https://ocio.wa.gov/policy/minimum-accessibility-standard</u>

Actual WCAG Guidelines (Not technically a regulation) <u>https://www.w3.org/TR/WCAG20/</u>



Resources - Checklist

✓ WebAIM WCAG 2.0 Checklist

http://webaim.org/standards/wcag/checklist

✓WebAIM Section 508 Checklist

http://webaim.org/standards/508/checklist

✓ UW Accessibility Checklist

http://www.washington.edu/accessibility/checklist/

✓Voluntary Product Accessibility Template (VPAT) <u>http://www.itic.org/policy/accessibility/</u>



Resources - Tools

- ✓Contrast Ratio Tools
 - ✓ WebAim Contrast Checker

http://webaim.org/resources/contrastch ecker/

✓ Contrast Ratio Reporter

http://leaverou.github.io/contrast-ratio/

- ✓ Color Contrast Spectrum <u>https://goo.gl/fNEHux</u>
- ✓ Chrome Extensions

✓ Wave

http://wave.webaim.org/extension/

- ✓ Chrome Extensions cont.
 - Accessibility Developer Tools <u>https://goo.gl/u7EkVB</u>

✓aXe

https://goo.gl/RgAhxE

- ✓Screen Readers
 - ✓ Jaws
 - ✓ <u>https://goo.gl/iPHJ1y</u>

✓ Microsoft Narrator

✓ <u>https://goo.gl/mqxstv</u>



Resources – Other Resources

✓NWESD Accessibility Resource Center <u>www.nwesd.org/website-accessibility-resources</u>

- ✓UW Accessibility Resource Center <u>http://www.washington.edu/accessibility/</u>
- ESD 112 Accessibility Resource Center <u>http://web3.esd112.org/accessibility/</u>
- ✓Kent School District

https://www.kent.k12.wa.us/accessibility

✓ Deque University

https://dequeuniversity.com/curriculum/online-classes/



Questions?



THANK YOU!

Contacts

David Forsythe dforsythe@nwesd.org (360) 299-4021 Jessica Haag jhaag@nwesd.org (360) 299-4017 Kyle Bunker <u>kbunker@nwesd.org</u> (360) 299-4061

