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# The Intersection of Accessibility and Inclusive Design

Improving quality by developing and designing products for all of our users.

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# What Is My Motivation Here?

Encourage the development of products to allow as many people as possible to access information.

Design products to allow people with disabilities a similar experience as their normative counterparts.

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# Why Should We Care?

It's the right thing to do.

It’s the law in many places.

Accessible sites are more usable for everyone.

It’s good business.

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# Why Should We Care?

In the USA, 1 in 4 people have some form of disability.

Many people not considered disabled have some sort of disability – even if it is simply wearing glasses.

Design taken for granted one day may be insufficient the next.

# Every One of Us Will Deal with a Disability at Some Point

- Visual
- Auditory
- Motor
- Cognitive
- Combination of any of those listed.
- Primary or Secondary/Situational

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# Accessibiity & Inclusive Design Impacts Everyone

Populations are living longer, and striving to keep doing the things that matter to them.

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# Accessibiity & Inclusive Design Impacts Everyone

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People are not “able bodied” or “disabled”. There is a continuum, and all of us sit on and move along that continuum as we age.

# Accessibiity & Inclusive Design Impacts Everyone

Minimizing capability demands allows more people to use our products.

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# Accessibiity & Inclusive Design Impacts Everyone

The greater population able to use our products directly improves the overall user experience for everyone.

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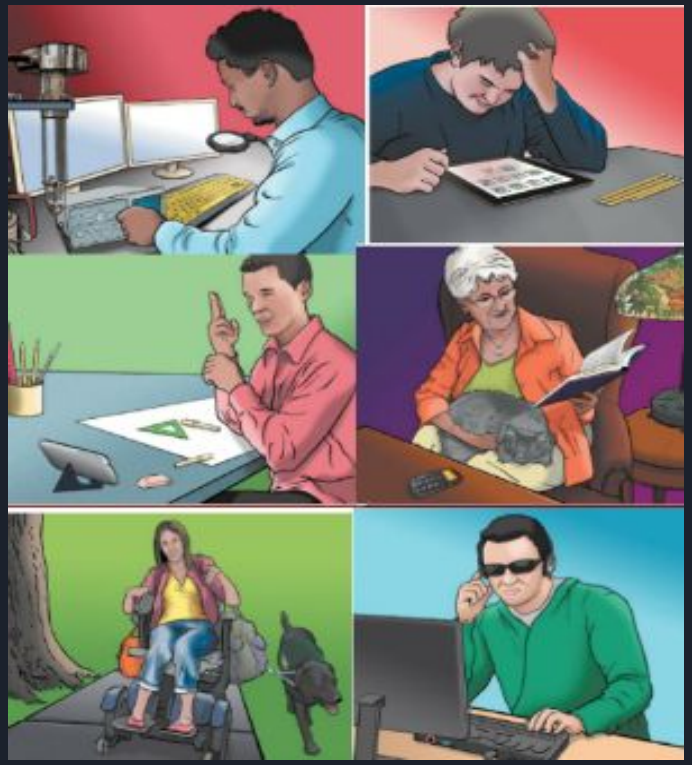
# Accessibility

“The design of products, devices, services, or environments for people with disabilities. The concept of accessible design ensures both "direct access" (i.e. unassisted) and "indirect access" meaning compatibility with a person's assistive technology.”

# Inclusive Design

"The design of mainstream products and/or services that are accessible to, and usable by, as many people as reasonably possible ... ***without the need for special adaptation or specialized design***."

# Who are we?



- Visual Issues
- Auditory Issues
- Mobility Issues
- Cognitive Issues
- Any or all of the above

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# Primary vs. Secondary Disabilities

Hearing – in a loud environment

Cognitive – when stressed or distracted

Visual – web on a mobile screen

Language – ESL, or any 2nd language

# Some excellent practices

https://github.com/UKHomeOffice/posters

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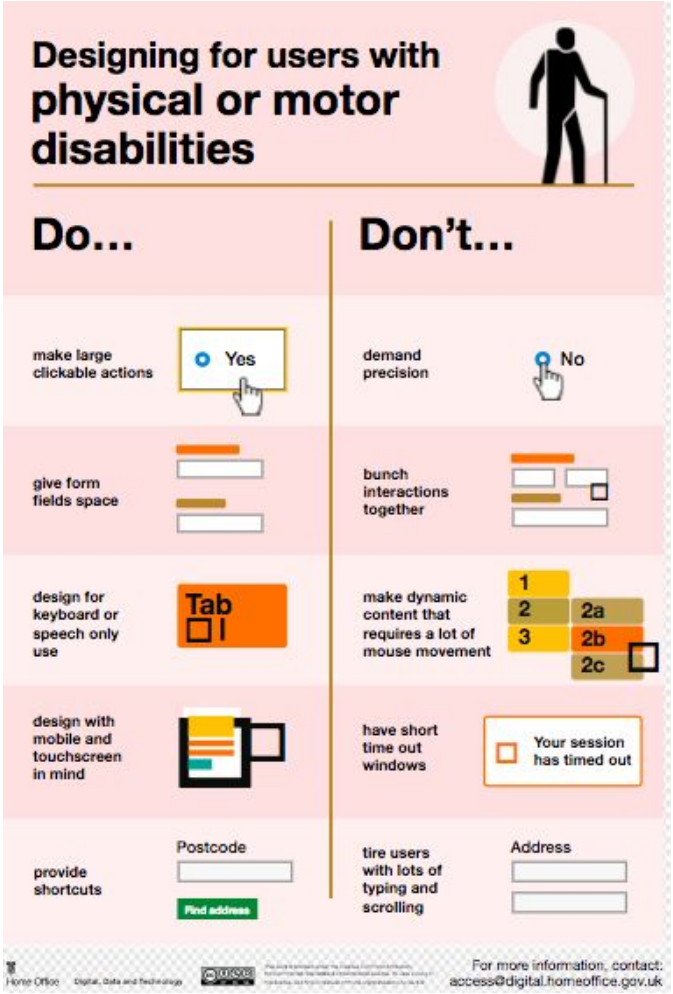


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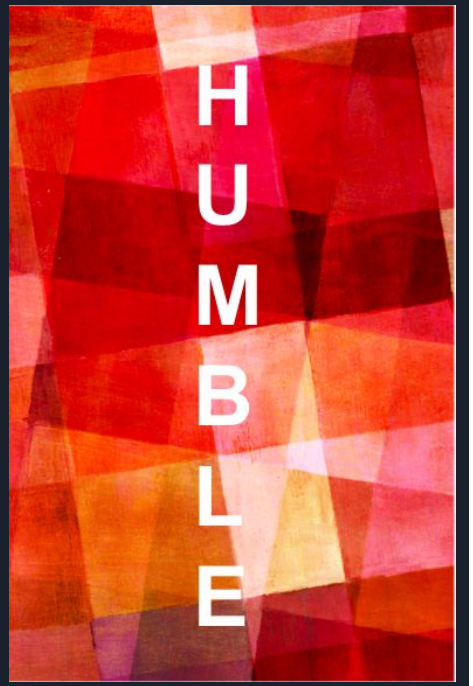


# PRACTICE EMPATHY: BE “HUMBLE”

Humanize

Unlearn

Model

Build

Learn

Experiment

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BE HUMBLE

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# HUMANIZE

Be empathetic, understand the emotional  components.

BE HUMBLE

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# UNLEARN

Step away from your default [device specific] habits.
Switch into different habit modes.

BE HUMBLE

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# MODEL

Use personas that help you see, hear and feel  the issues.
Consider behaviors, pace, mental state  and system state.

BE HUMBLE

# BUILD

Knowledge, Testing Heuristics, Core Testing Skills, Testing Infrastructure, Credibility

BE HUMBLE

# LEARN

Learn: what are the barriers? How do users Perceive, Understand and Operate?

BE HUMBLE

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# EXPERIMENT

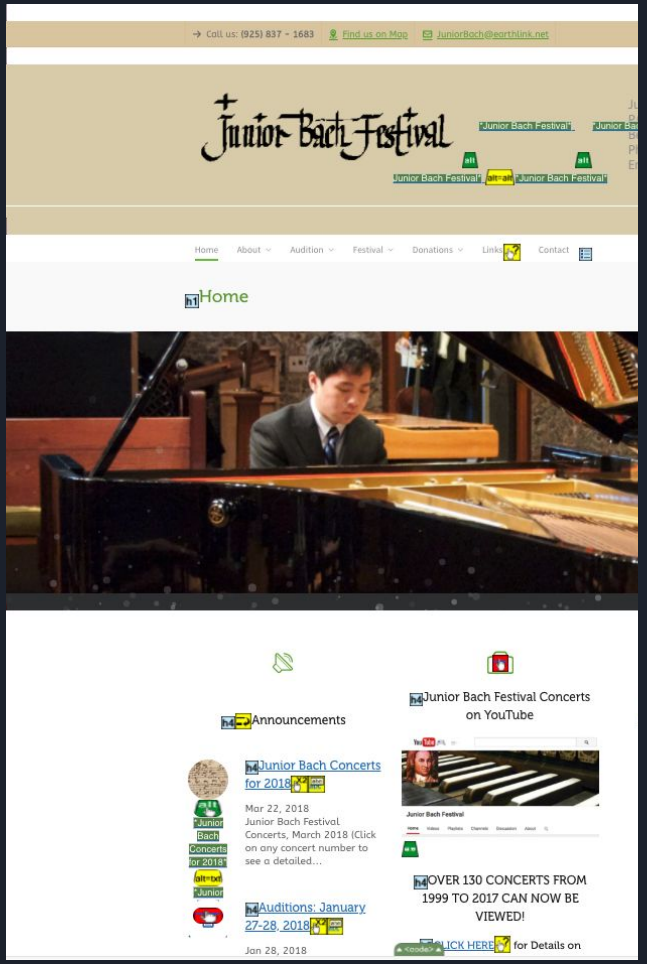
Put yourself into literal situations.  Collaborate with designers and programmers, provide feedback.

# Toys and Tools

## WAVE

Web based application at
http://wave.webaim.org

Also a PlugIn for Chrome and Firefox

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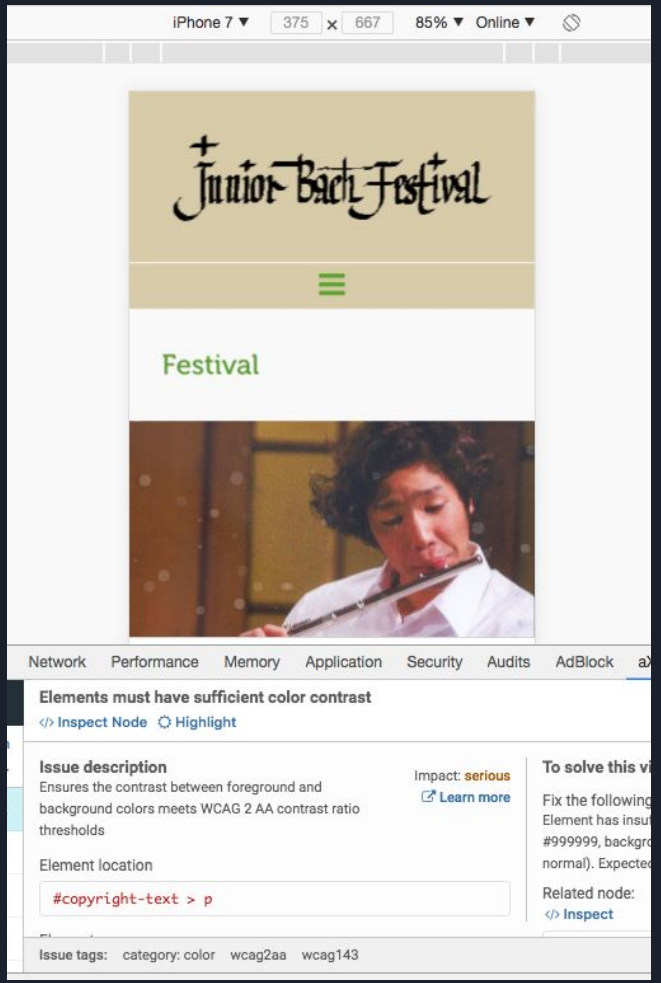
# Toys and Tools

**aXe**

Extension for Chrome and Firefox

Resides with the Developer tools

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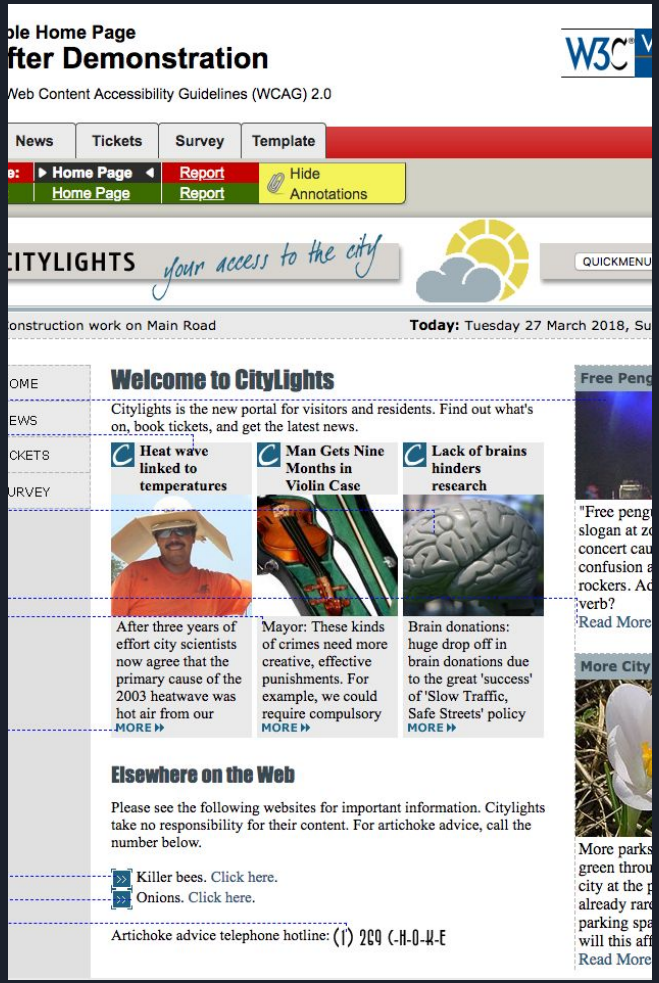
# Toys and Tools

## W3C Before and After

https://www.w3.org/WAI/demos/bad/

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# Toys and Tools

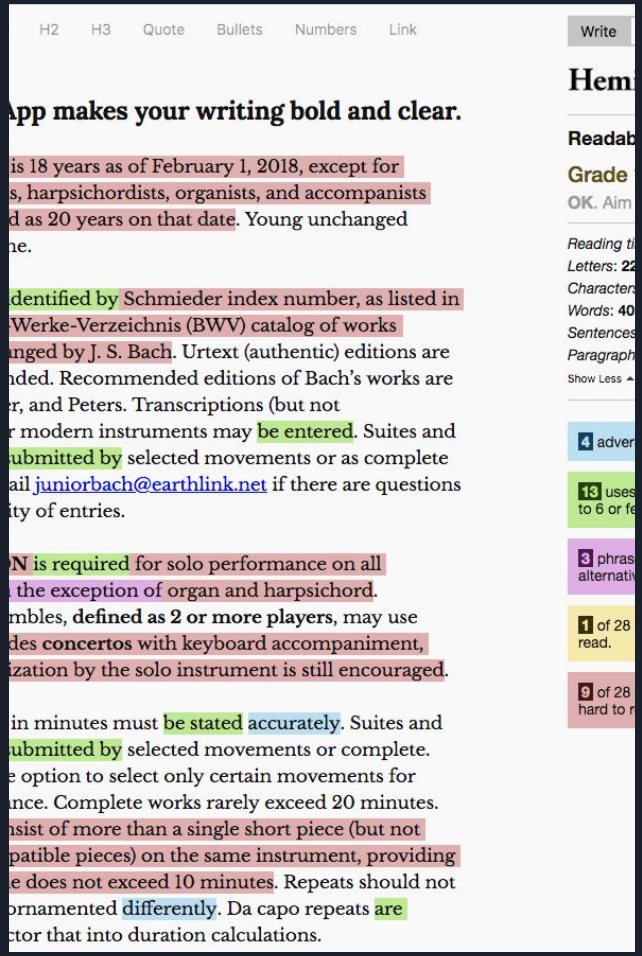
## HEMINGWAY

Analyzes writing

Offers suggestions to clean it up.

Shows target range of readership

9th Grade Reading Level is the sweet spot

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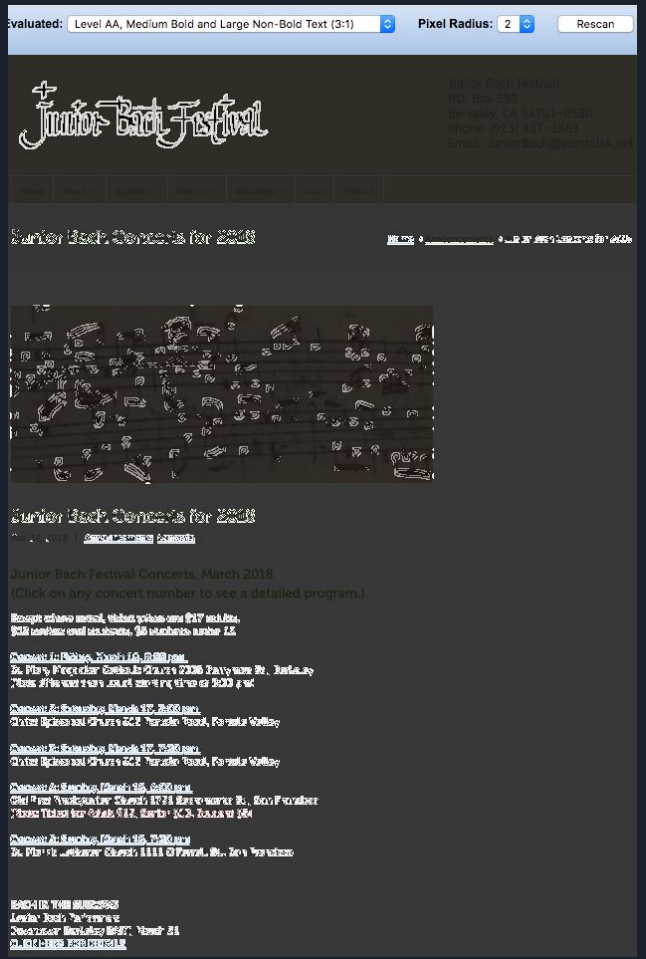
# Toys and Tools

## COLOR CONTRAST ANALYZER

- Plug-In for Chrome
- Quick view to determine what falls into range for color contrast.

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# Where to Learn More

- WAI/ARIA:
  - http://www.w3.org/WAI/intro/aria
- Web Content Accessibility Guidelines (WCAG):
  - http://www.w3.org/TR/WCAG20/
- Inclusive Design Toolkit (University of Cambridge)
  - http://www.inclusivedesigntoolkit.com/betterdesign2/

# Toolbox

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**WAVE, Web Accessibility Evaluation Tool**:
http://wave.webaim.org/

**aXe: the Accessibility Engine**:
https://www.deque.com/axe/

**Color Contrast Analyzer**:
http://accessibility.oit.ncsu.edu

# Toolbox

**Hemingway Editor**:
http://www.hemingwayapp.com/

**Web Content Accessibility Guidelines (WCAG) Overview, W3C, Web Accessibility Initiative**:
https://www.w3.org/WAI/intro/wcag

**Before and After Demonstration, W3C, Web Accessibility Initiative**:
https://www.w3.org/WAI/demos/bad/

# FInal Thoughts

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If you are not clear about what you are looking at or for, your intended users won't be clear on it, either.

# Further Reading

Wikipedia. “Accessibility”:
https://en.wikipedia.org/wiki/Accessibility
(accessed October 9, 2022)

British Standards Institute. 2005. “What is Inclusive Design?”:
http:// https://www.inclusivedesigntoolkit.com/whatis/whatis.html
(accessed October 9, 2022)

Disabled World. “Defining Disability Diversity in Society”:
https://www.disabled- world.com/disability/diversity.php
(accessed October 9, 2022)

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# Further Reading

Census Bureau Reports. Nearly 1 in 5 People Have a Disability in the U.S.: https://www.census.gov/newsroom/releases/archives/miscellaneous/cb12-134.html (accessed October 9, 2022)

World Health Organization: World Report on Disability: https://www.who.int/teams/noncommunicable-diseases/sensory-functions-disability-and-rehabilitation/world-report-on-disability (accessed October 9, 2022)

North Carolina State University. The Principles of Universal Design: https://projects.ncsu.edu/ncsu/design/cud/pubs_p/docs/poster.pdf (accessed October 9, 2022)

# Further Reading

Sydik, Jeremy J. 2007. "Design Accessible Web Sites: Thirty-Six Keys to Creating Content for All Audiences". Pragmatic Publishing

W3C. Web Accessibility Initiative. Web Content Accessibility Guidelines (WCAG): https://www.w3.org/WAI/intro/wcag (accessed October 9, 2022)

W3C. Web Accessibility Initiative. Before and After Demonstration: https:// www.w3.org/WAI/demos/bad/ (accessed October 9, 2022)

# Further Reading

Pickering, Heydon. 2016, “Inclusive Design Patterns: Coding Accessibility into Web Design”. Smashing Magazine GmbH

Kalbag, Laura, 2017, “Accessibility for Everyone”, A Book Apart: https://abookapart.com/products/accessibility-for-everyone (accessed October 9, 2022)

S. Horton and W. Quesenbery, 2013, “A Web for Everyone”, Rosenfeld Media: https://rosenfeldmedia.com/books/a-web-for-everyone/https://rosenfeldmedia.com/books/a-web-for-everyone/ (accessed October 9, 2022)

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# QUESTIONS???