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Reaching student communication and learning needs through web accessibility

Welcome!

- This presentation will examine web accessibility and how it relates to the learning and communication needs of students in a technology-driven society.
- Web accessibility information, examples of compliant and non-compliant content, as well as accessibility tools will be provided.

What is a disability?

- Short Versions:
  - A limitation (Riesmeyer, 2013).
  - The outcome of the interaction between a person with an impairment and the environment and attitudinal barriers she/he may face (WHO, 2013).
- Major categories (W3C, 2013):
  - Motor
  - Cognitive
  - Visual
  - Auditory

Major Life Activities

- Seeing
- Hearing
- Eating
- Sleeping
- Walking
- Standing
- Lifting
- Bending

- Speaking
- Breathing
- Learning
- Reading
- Thinking
- Communicating
- Working
- Interacting with others

Reasonable Accommodations

- An adjustment or auxiliary aid
  - No fundamental alteration in the function of a program or service
  - Does not impose an undue financial or administrative burden to the institution/organization.

You're not alone.

- It is not just about a disability.
- Accessibility relates to different…(Riesmeyer, 2013)
  - Abilities
  - Devices
  - Situations

The world is **DiFFERENT.**
Community is inclusive.

World Wide Web/Internet

- How is it used?
  - News
  - E-mail
  - Shopping
  - Entertainment
  - Education
  - Communication
- Does everyone use/access/view the Internet the same way?

What is web accessibility?

- Web Accessibility refers to the regulations regarding accessible content on the World Wide Web.
- "The power of the web is in its universality. Access by everyone regardless of disability is an essential aspect." – Tim Berners-Lee (W3C, 1997)

Origin of Web Accessibility

- In the United States, applicable laws include:
  - ADA-Americans with Disabilities Act (1990)
  - IDEA-Individuals with Disabilities Education Act (1997)
  - Rehabilitation Act (1973)
    - Section 504 & 508
- Web Accessibility is centered around:
  - WCAG- Web Content Accessibility Guidelines
    - W3C (World Wide Web Consortium)
  - Section 508
    - Rehabilitation Act of 1973

Assistive Technology

- Assistive Technology has primarily been used by individuals with disabilities, which includes examples such as:
  - Alternative input devices
  - High contrast features available on computers and mobile devices
  - On-screen keyboards
  - Screen readers such as JAWS and Orca
  - Text enlargers
  - Transcriptions
  - Voice recognition software such as Dragon Naturally Speaking

Screen Reader Example

- Neal Ewers
- Trace Institute
  - University of Wisconsin
- Use of a screen reader/speech synthesizer

- http://www.youtube.com/watch?v=VvWCnFjAGgo

Where do I begin?

- **Review the literature**
  - Regulations
    - Section 508
    - WCAG (2.0)
  - Recommendations
    - Reviews & Tips on Web Accessibility
- **Build it!**
  - Website/Document
- **Test your product**
  - Accessibility Checkers
- **Revise & Distribute**

What rules should I follow?

SECTION 508

- Non-text elements
- Multimedia
- Color
- Styles
- Image Maps (outdated)
- Data Tables
- Frames
- Flicker
- NoScript (outdated)
- Links to plugins
- Skip Navigation
- Redirects

WCAG 2.0

- Principle 1: Perceivable
  - "Information and user interface components must be presentable to users in ways they can perceive."
- Principle 2: Operable
  - "User interface components and navigation must be operable."
- Principle 3: Understandable
  - "Content and controls must be understandable."
- Principle 4: Robust
  - "Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies."

Quick Tips

- ## Use relative font sizes on web pages/documents
  - Headings: H1, H2, H3, H4
  - Paragraph
    - Try to avoid **Bold** text for headers, use the H settings instead
- ## Web Links
  - Links are always underlined.
    - Do not underline normal text unless it is a link.
  - Use meaningful names
    - "Click Here" isn't a meaningful link

Quick Tips

- Alternative Text (ALT Text)
  - Required for all graphics and objects
  - Be descriptive, yet concise
    - Unacceptable ALT: A cute dog
    - Acceptable ALT: A small, ten-pound dog with brown, white, and black markings and is of the Pomeranian and Papillon breeds

Quick Tips
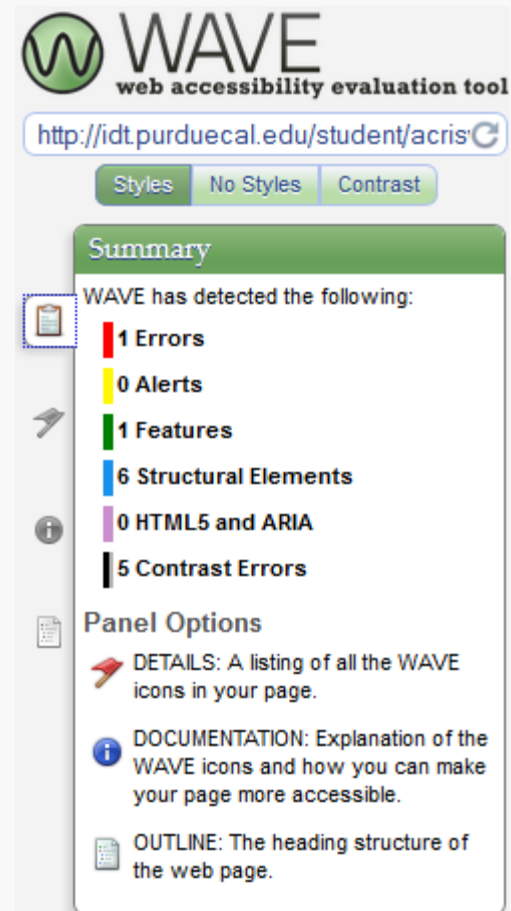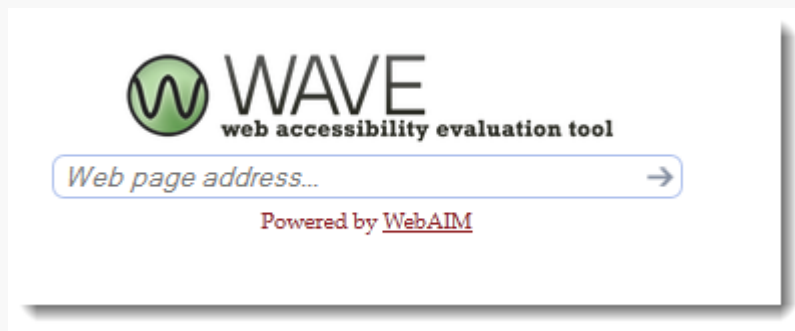
- Documents
  - Utilize styles in documents

- Paragraph Spacing
  - Refrain from hitting "enter" for spaces
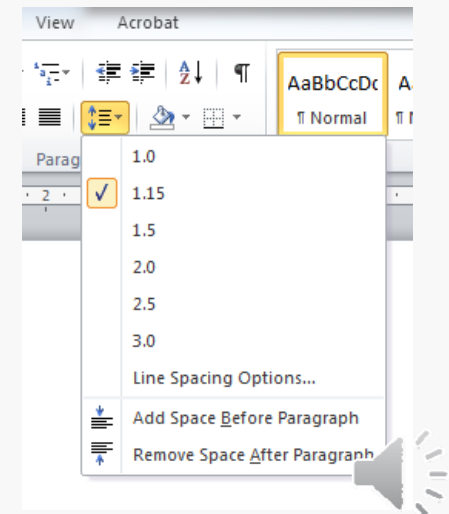
Testing

- WAVE (WebAIM): http://wave.webaim.org/
- Things to look for:
  - Errors
  - Alerts (Case-by-case)
  - Color Contrast
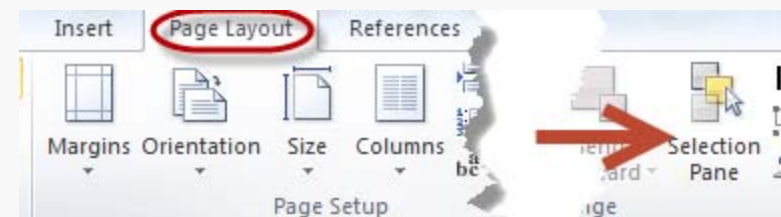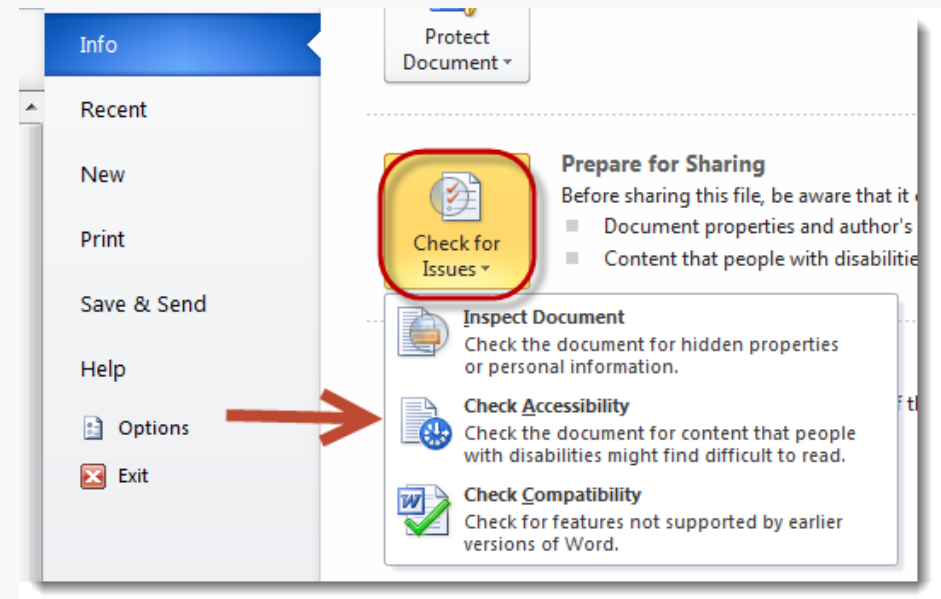
Testing

- Document Accessibility Checker
  - Look for:
    - Heading text
    - Alt tags
    - Reading Order

Accessibility & User Experience

- Let's review…
  - A disability
  - Major life activity
  - Accessibility
    - Section 508 & WCAG
  - Assistive Technology
    - Specialized technology & software
  - Accessibility checkers

How would you know?

- Websites

- Let's check! (WAVE)
  - Example A
  - Example B

How would you know?

- Documents

- Example A:
  - Document

- Example B:
  - Document

Assistive Software Example

- Software: Dragon Naturally Speaking 12
  - Nuance, Incorporated.
- User: Full-time graduate student

- Demonstration link available on website.

Behind those eyes...

- Someone with a disability:
  - Attention Deficit Hyperactive Disorder
    - Visual & Hands on Learner
  - Closed Captioning:
    - Auditory Processing Delay
    - Hearing Loss
  - Carpal Tunnel
    - Dragon Naturally Speaking 12

Accessibility & You

- Where would be we in society without accessibility or assistive technology?

- We all can benefit from accessibility and assistive technology.

- Adopting Accessibility into your curriculum is easy.

Thank You!

- Resource list available for distribution

- Contact: acriswell3@gmail.com

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