

Opening Doors

An introduction to digital accessibility.

Disclaimer

- Oklahoma statute authorizes ABLE Tech to coordinate with the Office of Management and Enterprise Services to provide technical assistance to agencies concerning the requirements of EITA in Oklahoma. This technical assistance is intended solely as informal guidance; it is not a determination of the legal rights or responsibilities of entities subject to Oklahoma statute or section 508.

ACCESSIBILITY

What is it? Why do we need to worry about it?

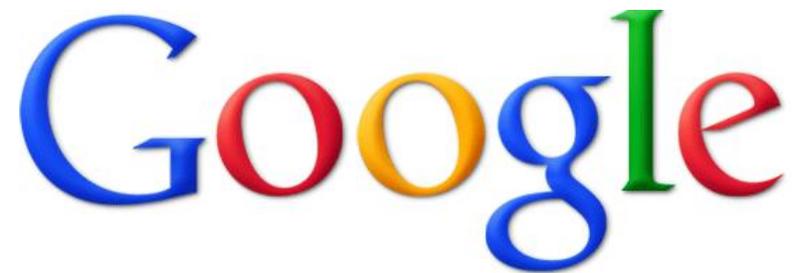
Remember

- We are all designing for our future selves
 - Jared Smith, WebAIM

What is digital accessibility?

- Technology compatibility
 - Make digital content as understandable to technology as possible.
- Fair and equal
 - Make the experience equivalent regardless of factors we cannot control.
- Universal access
 - Don't restrict anyone from getting where they want to go.

- Make content understandable to technology.
 - Searches
 - Assistive technology (AT)



Technology Compatibility

Fair and equal availability

- Make the experience as equivalent as possible regardless of what we cannot control.
 - Computer type
 - Tablet size
 - Phone operating system
 - Disability
 - Visual
 - Hearing
 - Motor
 - Cognitive

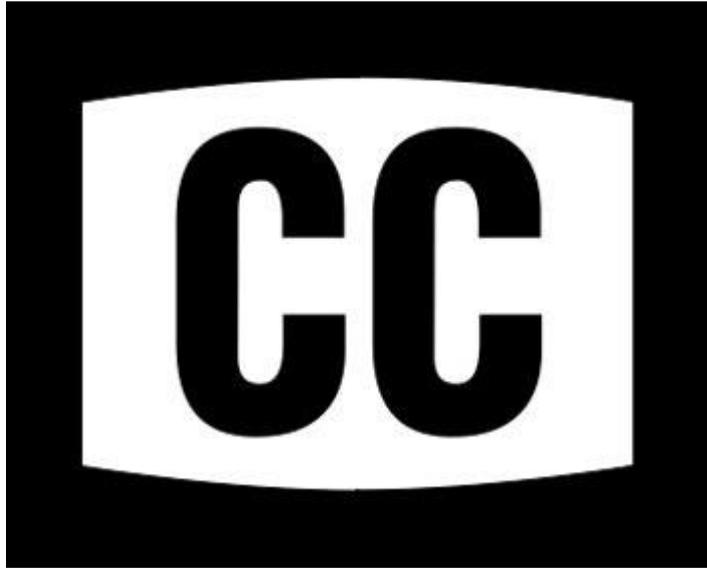
- Blindness, low vision, color blindness, etc.
 - Glasses
 - Operating system zoom features
 - Braille readers
 - Screen reading software



Visual disabilities

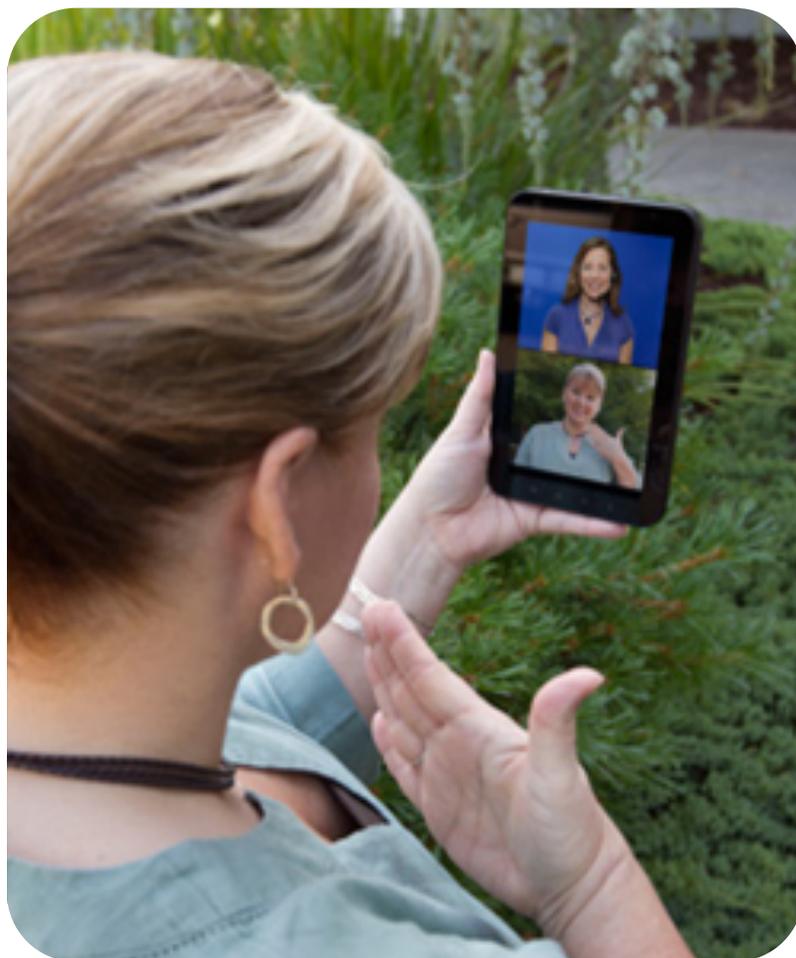
VoiceOver

- Apple's screen reading software
- Built in to Mac OS, iOS
- Sophisticated screen reader
- No Apple? Try Non Visual Desktop Access (NVDA) for PC



- Full/partial deafness
 - Transcribed audio
 - Captioned video

Hearing disabilities



Technology as AT

Motor disabilities

- Carpal Tunnel Syndrome, full/partial paralysis, fine motor
 - Keyboards
 - Adaptive switches
 - Breath controls



Wide spectrum of AT

Cognitive disabilities

- Behavioral, learning, sensory
 - Calendar reminders
 - Simplified content layout

- Be intentionally inclusive.
- Don't discriminate.



Universal access

Accessibility is...

- ...a matter of civil rights
- ...not just a technology issue
- ...decentralized
- ...critical to employment

Opportunities for us

- Improve employment among people with disabilities
 - Unemployment of people with disabilities is roughly twice the rate of people without disabilities
- Attract employers and employees from out of state
- Keep employers and employees from in state
- Improved web site search engine optimization, mobile device compatibility
- Possibly easier to maintain accessible content
- Reduce risk

General notes

- We already have most of the tools
- Making accessible content is easier in many authoring tools.
- Accessible material is easier for everyone to use.
 - Headings
 - Color contrast
 - Video captions for multilingual audience, large presentation space, quiet viewing, multimodal learning.

STANDARDS AND POLICY

Keeping everything consistent



- World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0
- Targets all content that uses web technology.
 - Instructional material
 - Course websites
 - Administrative documents
 - Web software
 - Multimedia
 - Plugins
 - Etc.

International standards

Statute and policy

- Americans with Disabilities Act (ADA)
- Section 508 of the Federal Rehabilitation Act of 1973, 1998
- Department of Justice
 - Notices of Proposed Rulemaking
 - Section 508 and Title II of the ADA due this summer
 - Title III of ADA due in December
- Oklahoma Electronic and Information Technology Accessibility (EITA) statute, effective 2005
 - Kept by Oklahoma Office of Management and Enterprise Services
 - Look for your Accessibility Compliance Representatives in your agency

When lawyers get involved



Specific cases and programs

- Project Civic Access
 - Eliminate “physical and communication barriers that prevent people with disabilities from participating fully in community life.”
 - <http://www.ada.gov/civicac.htm>
- US Social Security Administration, 2009
- Arizona State University, 2009
- Penn State University, 2010
- New York University/Northwestern University, 2011
- Baltimore City Schools, 2012
- Sacramento, CA Public Library, 2012
- University of Montana, 2012
- Private sector: Healthcare, banking

Legal takeaways

- Look before you leap. Make accessibility a focus from the outset.
- Look at functional accessibility, not just compliance to standards.
- Purchase and use accessible products
- Best to catch a problem internally instead of dealing with a complaint
- Be proactive

Who is responsible?

- Vendors
- Purchasing agents
- Content authors/managers
- Administration and management
- Developers and designers
- Project managers
- Business analysts
- Policy makers/standard bearers
- Legislators
- Lawyers

In sum: POUR

- Perceivable
- Operable
- Understandable
- Robust

Perceivable

- Users must be able to perceive the information being presented
 - It can't be invisible to all of their senses
- If a user can't get information into his or her brain, then it's not helpful

Operable

- Users must be able to operate the interface
 - The interface cannot require interaction that a user cannot perform
- Input device independence

Understandable

- Users must be able to understand the information as well as the operation of the user interface
 - The content or operation cannot be beyond their understanding
- Content
- Navigation

Robust

- Users must be able to access the content as technologies advance
 - As technologies and user agents evolve, the content should remain accessible
- Future proof

Accessible Documents

7 steps to more accessible digital
documents

Disclaimer

- We won't cover everything you need to know in one hour, but...
 - ...you will be able to create more accessible documents
 - ...you will be able to generalize this information to web sites, software
 - ...we offer more in-depth training
- Examples are from Microsoft Word 2010

BACKGROUND

Some foundation to stand on

Presentational vs. Structural

- Presentational: What the document looks like.
 - Perceived visually.
 - Breaking a document apart into sections, etc.
- Structural: Defines logical composition behind the scenes.
 - Converting presentation into a language that other technology understands.
 - Examples
 - Word Style
 - HTML mark-up
 - PDF tag

Presentation and structure

- Make them match
 - Convey the same meaning to broadest audience

How do documents fit?

- Make up lots of content on our sites
 - Word
 - PDF
 - Excel
- Often central to consumer experience

CREATING MORE ACCESSIBLE DOCUMENTS

A primer

Your top 7 for today

- 7 things to make document content more accessible
 - Make structural headings
 - Make structural lists
 - Write alternative text for visual elements
 - Identify table header rows
 - Think about how you use color
 - Use links well
 - Save files as tagged PDF files

AaBbCc **AaBbCc** **AaBbCcI** **AaBbCcI** **AaBbCcI**
Heading 1 Heading 2 Heading 3 Heading 4 Heading 5

- Presentational
 - Establish logical structure
 - Create content chunks
 - Make a more readable document
- Structural
 - Convey presentational information to technology.
 - Navigation in Word 2010, Acrobat Reader.
 - Create a dynamic Table of Contents

Headings

Alternative text

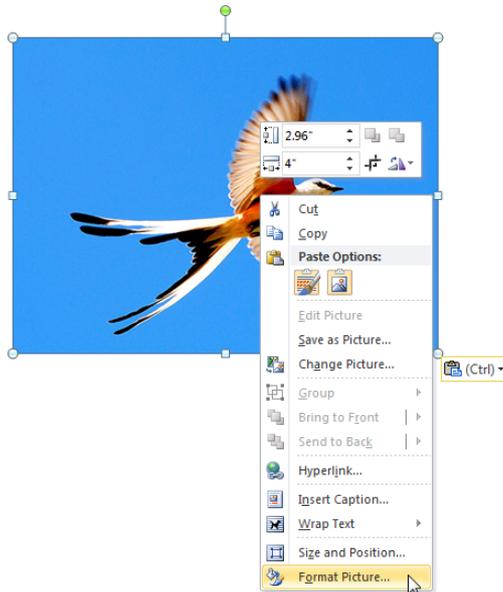
- Concise and meaningful.
 - Set context in body of document.
 - Keep relevant text in close proximity to the visual element.
 - No filenames, preferably no repeated captions.
- Aim for 120-140 characters.
- Also visible in Word, Reader on mouse-over
 - Multi-modal learning aid



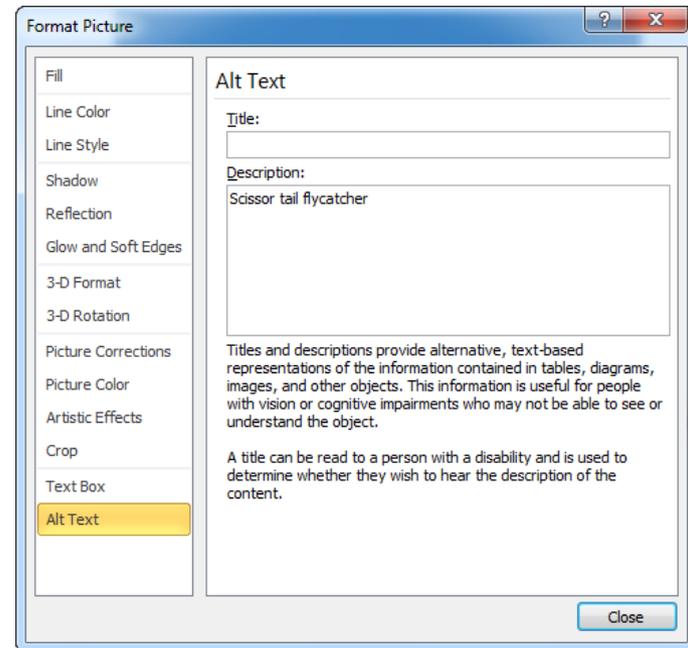
- What does the image convey?

Context is key

Right click>Format Picture



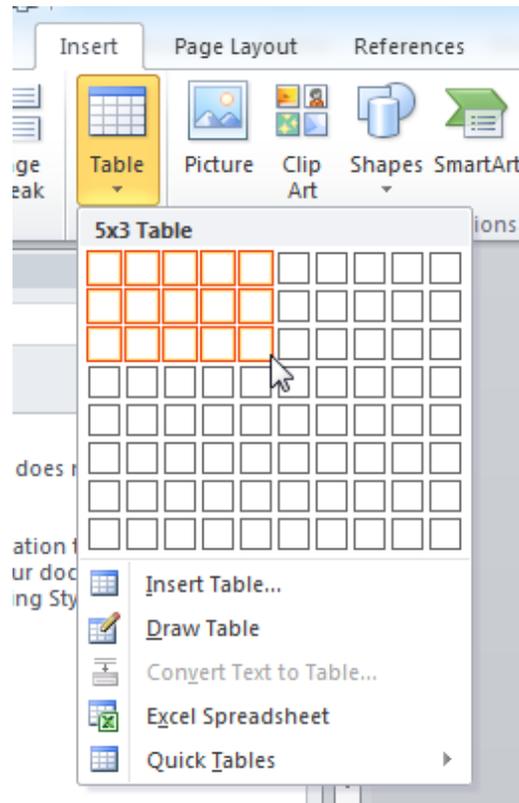
Add in Description field



Add alternative text

Tables

- Create tables through the Insert tab.
 - Insert>Table
- Lay out tables with column headers, row headers if necessary.
- Identify one column heading row.
 - Select the heading row.
 - Right click>Table Properties>Row Tab>check Repeat as header row at the top of each page



- Insert>Table>click down arrow
- Insert Table... option lets you add more rows, columns

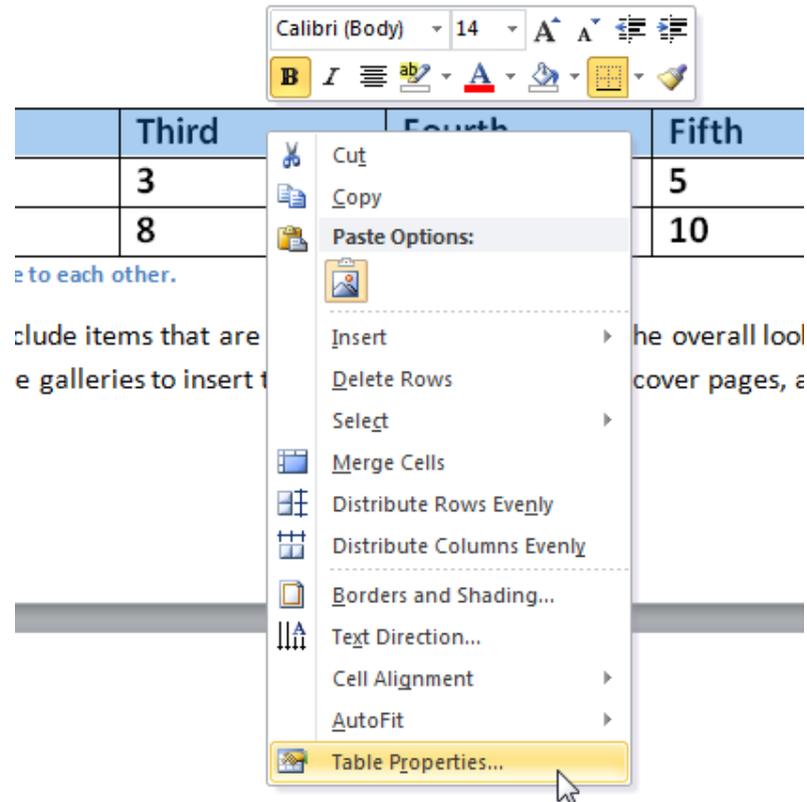
Insert a table

Simple table

First	Second	Third	Fourth	Fifth
1	2	3	1	5
6	7	8	9	10



Open Table Properties



The screenshot shows the Microsoft Word ribbon with the 'Table' tab selected. A context menu is open over a table, with the 'Table Properties...' option highlighted at the bottom. The table has three columns labeled 'Third', 'Fourth', and 'Fifth'. The 'Third' column contains the numbers 3 and 8. The 'Fifth' column contains the numbers 5 and 10. The 'Fourth' column is empty. The context menu includes options such as Cut, Copy, Paste Options, Insert, Delete Rows, Select, Merge Cells, Distribute Rows Evenly, Distribute Columns Evenly, Borders and Shading..., Text Direction..., Cell Alignment, AutoFit, and Table Properties... A mouse cursor is pointing at the 'Table Properties...' option.

	Third	Fourth	Fifth
	3		5
	8		10

Identify table header row

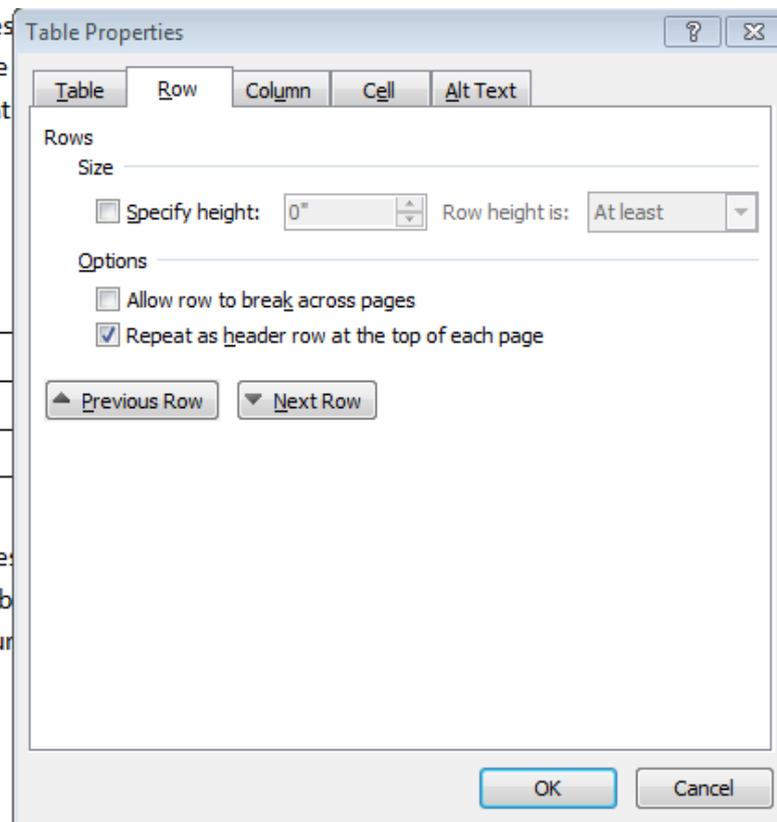
command. Both the Themes gallery and the Quick Styles provide reset commands so that you can always restore your document to the original contained in your current

Section 2, details

First	Second	Third
1	2	3
6	7	8

Table 1: showing numbers as they relate to each other.

On the Insert tab, the galleries include items that are de your document. You can use these galleries to insert tab other document building blocks. When you create pictur with your current document look.



Challenge: complex table

	Week 1	Week 2
Sample 10	1.2	3.4
	5.6	7.8
Sample 20	9.1	.1
	2.3	4.5
Sample 30	6.7	8.9
	1	2

Notes about color

- Keep color contrast high for better all-around readability.
 - Primary problems are with visual elements and text.
- Don't only use color to convey information.
 - For example, don't use red font color to emphasize text.
 - Use Word Styles instead, like Emphasis.

Do something like
this...

Example 1

Product List
Printers
Laser
Model 1 - 4 ppm - 2 bin
Model 2 - 10 ppm - 3 bin
Ink Jet
Scanners

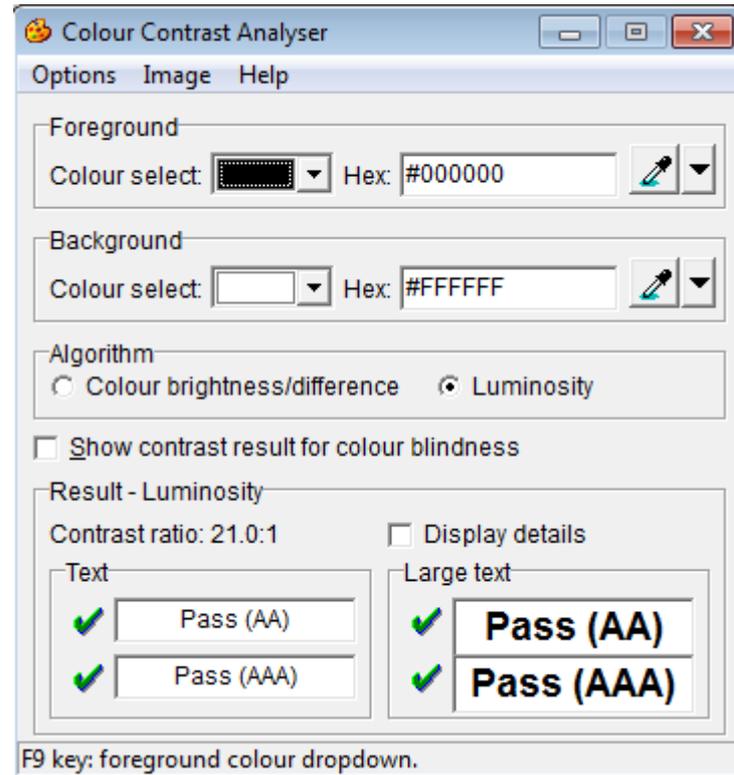
Don't do this...

Example 2

Product List
Printers
Laser
Model 1 - 4 ppm - 2 bin
Model 2 - 10 ppm - 3 bin
Ink Jet
Scanners

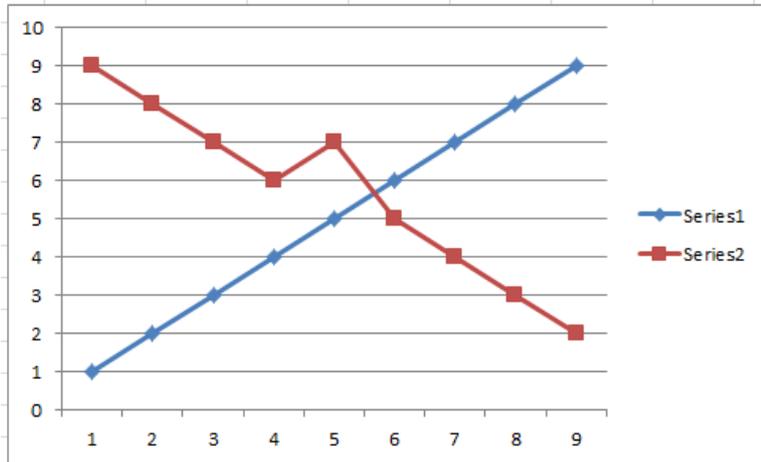
Color contrast

- Check with The Paciello Group Colour Contrast Analyser

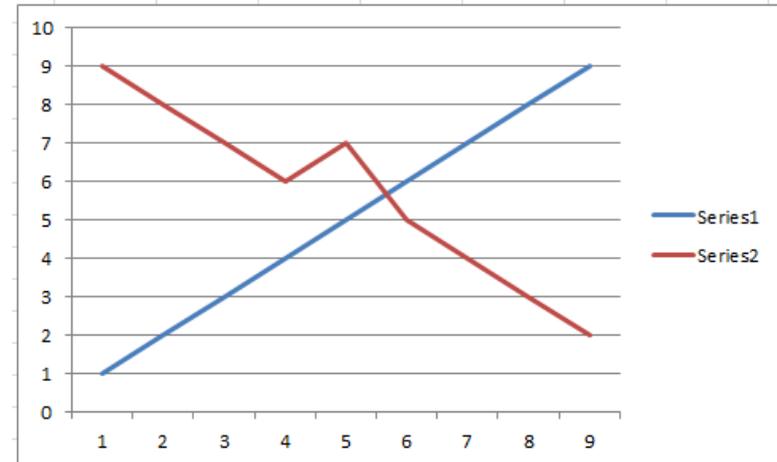


Verify contrast

Do this...



Don't do this...

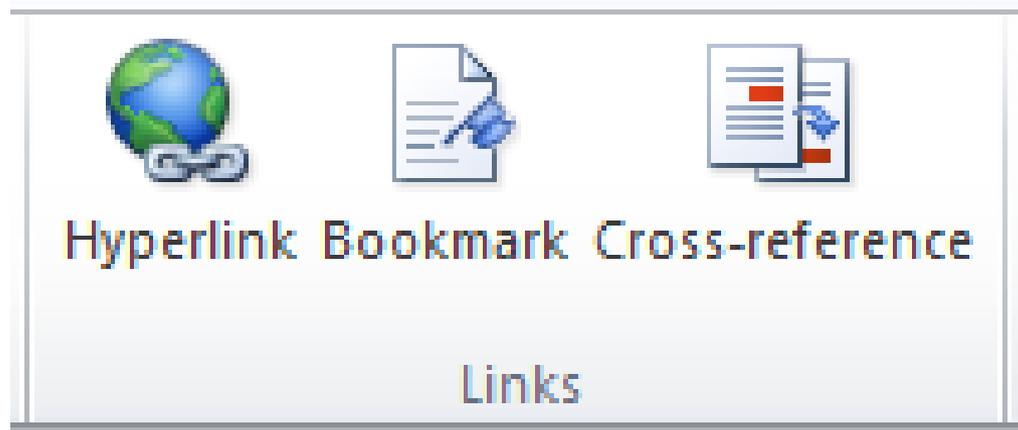


Color only

Links

- URL, Help text and Link text
 - URL
 - The actual web site address: <http://www.ok.gov/abletech/>
 - Link Text
 - Words in the sentence that describe the link: [Read more about Oklahoma ABLE Tech.](#)
 - Help Text/Screen Tip
 - Text that appears on mouse-over and tells users where the link goes:
Oklahoma ABLE Tech
- Sometimes both URL and Link Text are best

- Insert Tab>Links Group>Hyperlink
 - Text to display = Link text
 - Address = URL
 - ScreenTip = Help Text



Insert a link

Export to tagged PDF

- Do not use Print to PDF
 - Creates an image of the document
- Easy to do directly from MS Word
- File>Save As>PDF
 - Click Options button and verify that “Document structure tags for accessibility” option is selection in “Include non-printing information section”.
- Document is saved as tagged PDF.
 - Verify accessibility with Acrobat Pro.
 - For many to most documents, this will do the trick.

Word Accessibility Checker

- New in Word 2010.
- Helpful but not comprehensive.
- Can identify missing alternative text, etc. and point you at the specific issue.
- Can't evaluate things like headings, lists.
- May have false positives.

Start a check

Document2 - Micro

File Home Insert Page Layout References Mailings Review V

Save
Save As
Save as Adobe PDF
Open
Close

Info

Recent
New
Print
Save & Send
Help
Options
Exit

Information about Document2

Permissions
Anyone can open, copy, and change a

Protect Document ▾

Prepare for Sharing
Before sharing this file, be aware that it

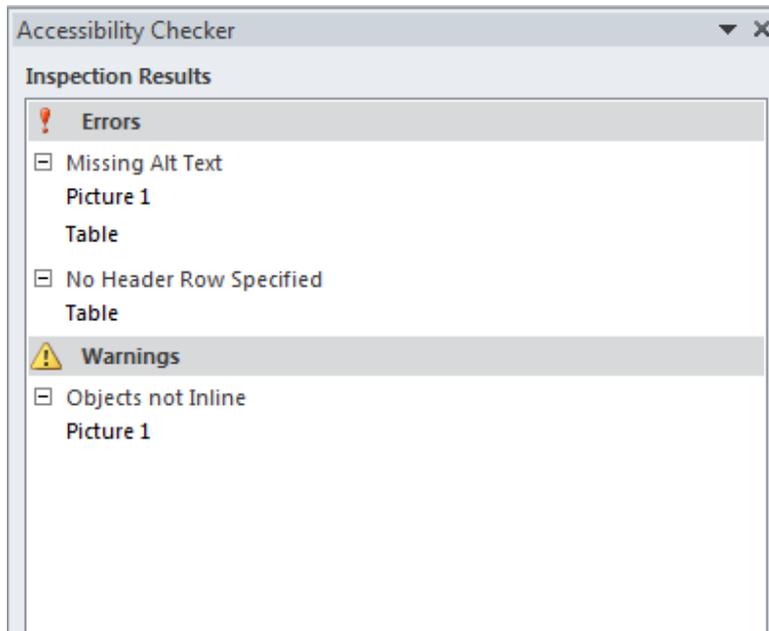
- Document properties and author's

Check for Issues ▾

Inspect Document
Check the document for hidden properties or personal information.

Check Accessibility
Check the document for content that people with disabilities might find difficult to read.

Check Compatibility
Check for features not supported by earlier versions of Word.



- Shows issues
- Errors
 - Need to address
- Warnings
 - May be a problem, check manually

Accessibility Check report

Multimedia accessibility

Transcription, captioning and playback

Policy and Statute

- Americans with Disabilities Act
 - Title II and III
- Section 508 of the Federal Rehabilitation Act, amended 2008
- Oklahoma Electronic and Information Technology Accessibility
- 21st Century Video Accessibility Act

Audio and video

- Considerations
 - Transcription
 - Captioning
 - Audio description
 - Keyboard access

Transcript vs. caption vs. audio description

- Transcript
 - Exact text that is spoken
 - Most time and resource intensive piece
- Caption
 - Transcript plus timing information for video
- Audio description
 - Describes visual elements in video
 - Separate track

Open and closed

- Open captions
 - Overlaid on the video itself
 - Cannot be turned on or off
- Closed captions
 - Separate track from the video
 - Can be turned on and off
 - Resulting caption file can be basis for searchable, indexed file

Audio accessibility

- Podcasts, etc.
- Transcript does the trick
- Embedded player must work with keyboard

Video accessibility

- Captions required
 - In sync with video
- Open or closed?
 - Consider audience, media
 - Compression of video will alter open caption appearance
- Embedded player must work with keyboard, screen reader

Embedded players

- Be navigable using a keyboard;
- Not interfere with accessibility features of other software or the operating system;
- Provide an on-screen indication of the current focus (the currently selected place of action);
- Provide information about the roles, states, and operation of each interface element to assistive technology;
- Use meanings consistently for any images that identify the software's controls, status, or program elements;
- Use the operating system to display text and contextual information;

More on embedded players

- Not override any user defined display settings in the operating system;
- Give users the choice of turning off animations and displaying information from the animations in other method;
- Not rely only on color to prompt users, or provide information or context;
- Provide a wide variety of color and contrast settings (only if the application allows users to adjust color and contrast);
- Not cause blinking or flashing at a rate greater than 2 Hz and lower than 55 Hz; and,
- Ensure that users of AT are able to fully use and navigate through electronic forms, and provide any necessary cues and directions to the AT.
 - From <http://www.howto.gov/web-content/accessibility/508-compliant-and-accessible-multimedia>

WRAPPING UP

What do we do now?

General Priority

- Critical to participation
- High traffic
- Central point to fix
 - Template, code library, contract language
- Resource availability

Checklists and resources

- Oklahoma EITA Technical Assistance Document
 - <http://www.ok.gov/about/documents/tad%202005.pdf>
- WebAIM Section 508
 - <http://webaim.org/standards/508/checklist>
- WebAIM WCAG 2.0 (A, AA and AAA)
 - <http://webaim.org/standards/wcag/checklist>
- Accessibility Priority Tool
 - <http://usability.com.au/2013/01/accessibility-priority-tool/>
- Goodwitch Hands-On Checklist
 - Google ahoy...

Tools

- Colour Contrast Analyser
 - <http://www.paciellogroup.com/resources/contrastAnalyser>
- WebAIM
 - Word <http://webaim.org/techniques/word/>
 - PDF <http://webaim.org/techniques/acrobat/>
- Microsoft
 - <http://www.microsoft.com/enable/products/office2010/>
- Adobe
 - <http://www.adobe.com/accessibility/products/acrobat/>
- NetCentric CommonLook
 - PDF <http://www.commonlook.com/CommonLook-PDF>
 - Office <http://www.commonlook.com/CommonLook-office>

Resources

- [WebAIM: Web Accessibility in Mind](#)
- [State of Oklahoma Accessibility pages](#)
- [Oklahoma ABLE Tech web and digital accessibility](#)
 - [Oklahoma EITA Technical Assistance Document](#)

Questions?

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Oklahoma ABLE Tech

Oklahoma State University

1-800-257-1705

http://www.ok.gov/abletech/IT_Accessibility/index.html

@okabletech on Twitter