

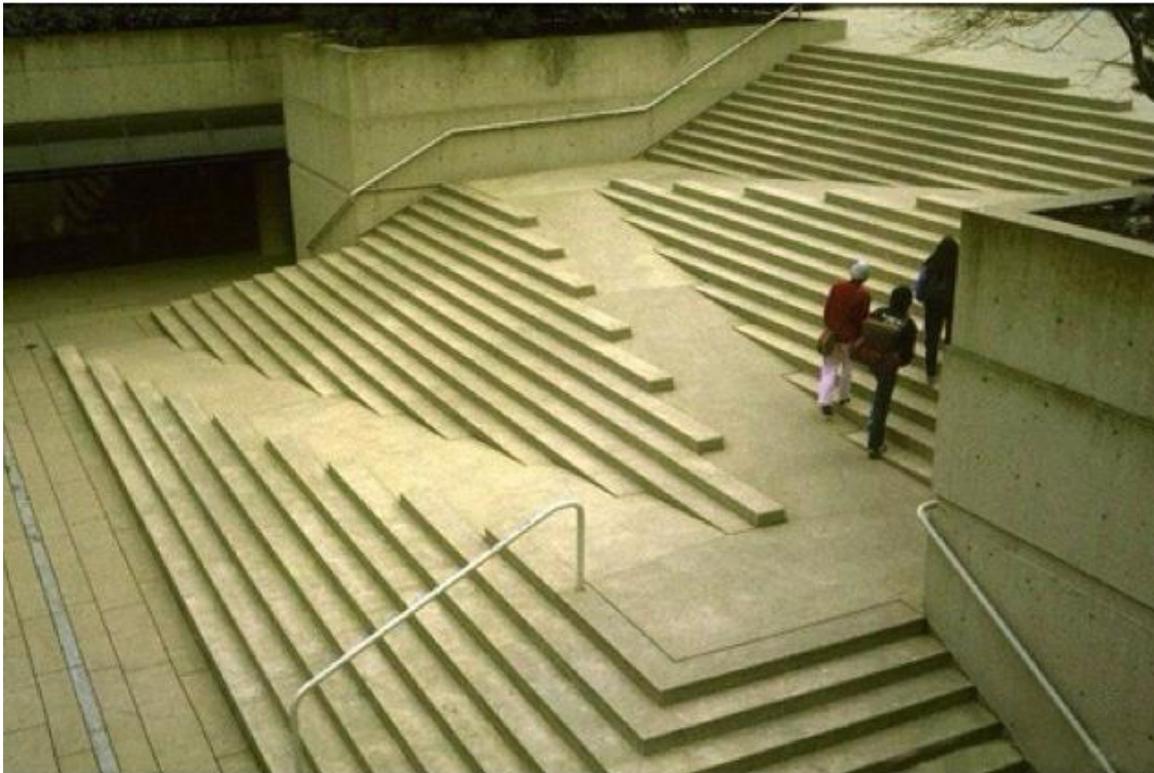
# Universal Design for Accessibility: It's the Law! It Helps EVERYONE!

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# What is Universal Design?

- ▶ **Universal Design** helps people with disabilities and EVERYONE ELSE. (Examples: door buttons, curb cuts, etc.)



# What is Universal Design for Learning?

- ▶ **Universal Design for Learning** is used when creating electronic documents such as online course materials, assignments, and faculty Websites.
- ▶ We need to make electronic information accessible to ALL!
- ▶ Schools need to implement Universal Design for Learning:
  - ▶ because it is the right thing to do.
  - ▶ because we want to obey the law that requires equal access for our students and colleagues.

# Accessibility vs. Disability

- ▶ When we think of Accessibility, we often think of people with disabilities. We think of students who have vision, hearing, or learning disabilities.
- ▶ **We think about “fixing” things to make them accessible for people with disabilities. We need to turn our thinking around and start “designing” things that work for ALL of us!! (Universal Design)**

# Accessibility Law 2017

- ▶ **January 2017 - update to section 508 of the Rehabilitation Act of 1973**, which details the accessibility standards federal agencies, contractors and employers must meet both online and in person,
- ▶ **Encompasses all public web content**, whether that content is viewed on a desktop computer, laptop, smartphone, tablet, or other mobile device.
- ▶ Examples of web content include **text, images, sounds, videos, controls, and animations**
- ▶ The rule goes into effect **Jan. 18, 2018**, giving federal agencies a year to prepare.

# Accessibility Law & Edu

- ▶ Section 508 doesn't directly address accessible technology in higher education, but it still affects colleges and universities.
- ▶ Some federal grant programs also come with accessibility requirements based on the law.
- ▶ Access to educational resources, including websites and online course materials for public schools, colleges, and universities.
- ▶ **Lawsuits are becoming an increasingly common strategy to compel colleges to ensure equal access to higher education for students with disabilities.**  
(Atlantic Cape CC)

# Accessibility Law: WCAG

- ▶ Web Content Accessibility Guidelines (WCAG) 2.0 is a stable, referenceable technical standard. WCAG includes 12 guidelines that are organized under 4 principles:
  - ▶ **Perceivable** - available to senses: sight, hearing, touch
  - ▶ **Operable** – Interface: forms, controls, navigation
  - ▶ **Understandable** - Content and interface: language, terms
  - ▶ **Robust** - can be used reliably by a wide variety of user tech
- ▶ For each guideline, there are testable success criteria, which are at three levels: A, AA, and AAA.
- ▶ **Covered entities must comply with both Level A and Level AA Success Criteria & Conformance Requirements specified in WCAG 2.0**

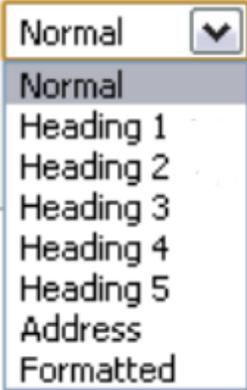
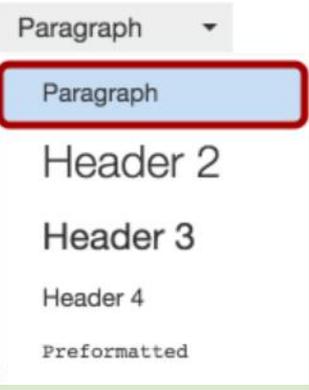
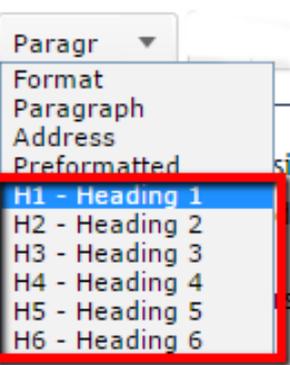
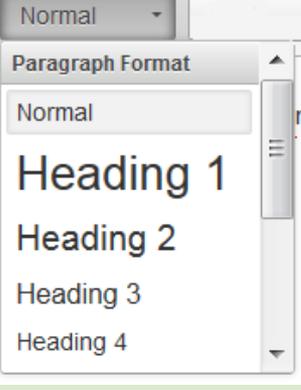
Easy Ways to Make  
Online/Hybrid Courses  
*(and Faculty Websites)*  
Accessible

# 1-Headings

- ▶ Choosing official “Headings” in an LMS editor or an HTML editor allows “screenreading” software to identify headings
- ▶ Headings are not just “big” and “bold” text
- ▶ Choosing headings allows the editor to add HTML tags `<h1></h1>`
- ▶ Heading levels range from `<h1>` (for page titles) to `<h6>` (for lowest level subheadings)
- ▶ How to add headings (two steps)
  1. Type in all text
  2. Highlight each heading and choose the heading level as if you were creating an outline

**TIP: use only ONE `<h1>` per page**

# LMS Headings

Blackboard	Canvas	D2L	Schoology	WebStudy
 <p>A dropdown menu for Blackboard showing options: Normal, Heading 1, Heading 2, Heading 3, Heading 4, Heading 5, Address, and Formatted. The 'Normal' option is selected and highlighted with a grey background.</p>	 <p>A dropdown menu for Canvas showing options: Paragraph, Header 2, Header 3, Header 4, and Preformatted. The 'Paragraph' option is selected and highlighted with a blue background and a red border.</p>	 <p>A dropdown menu for D2L showing options: Format, Paragraph, Address, Preformatted, H1 - Heading 1, H2 - Heading 2, H3 - Heading 3, H4 - Heading 4, H5 - Heading 5, and H6 - Heading 6. The 'H1 - Heading 1' option is selected and highlighted with a blue background and a red border.</p>	<p>Visual HTML</p> <p>In Schoology you have to go into the HTML code and enter the heading tags manually (unless I am missing something!)</p>	 <p>A dropdown menu for WebStudy showing options: Normal, Paragraph Format, Heading 1, Heading 2, Heading 3, and Heading 4. The 'Normal' option is selected and highlighted with a grey background.</p>

# 2 - Alternate Text

- ▶ Adding Alternate Text (Alt Text) to images allows “screenreading” software to describe or ignore an image
- ▶ Alternate Text must be context dependent. For a photo of American Holly, you may write one of the following for Alt Text:

1. *Ilex opaca*
2. holly leaves and berries
3. holiday evergreens
4. “”



- ▶ Alternate Text should be replaced with “” in HTML code for images that are decorative or do not add information to the content
- ▶ **Tip: for complex images you will need to provide a detailed description**

# LMS Alt Text

## Blackboard

Name of Link to File

Alt Text

Alt text defines what this image is for a visually impaired or blind user using assistive technology such as screen readers. All image and multimedia files should have alt text associated with them.

Open in new window  Yes  No

## Canvas

Insert / Edit Image ×

Image Source

URL Canvas Flickr

- Course files
  - Assignments
  - Images
    - trees.JPG **1**
  - Music
  - Public Files
  - Syllabus
  - My files

Attributes

Alt text  **2**

Describe the image to improve accessibility

Dimensions  x  **3**

Aspect ratio will be preserved

Cancel Update

# More LMS Alt Text

D2L

Schoology

**Provide Alternative Text**

 **Alternative Text**  
Provide alternative text for the image. This text should convey the same information as the image. If this image does not convey any information, select "this image is decorative".

Alternative Text:

This image is decorative

**Edit Image** ✕

**Image Description**

**Alignment**  ▾

**Dimensions**  x

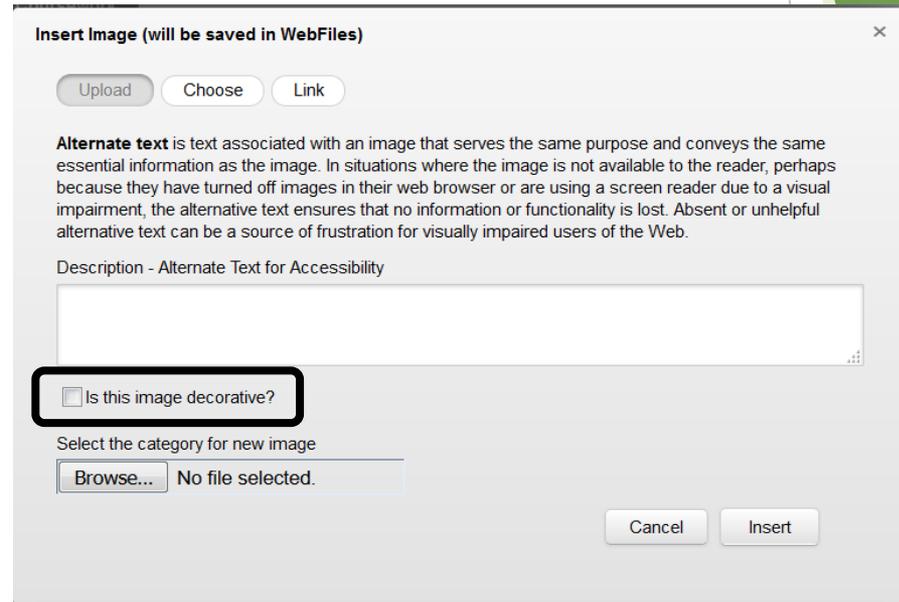
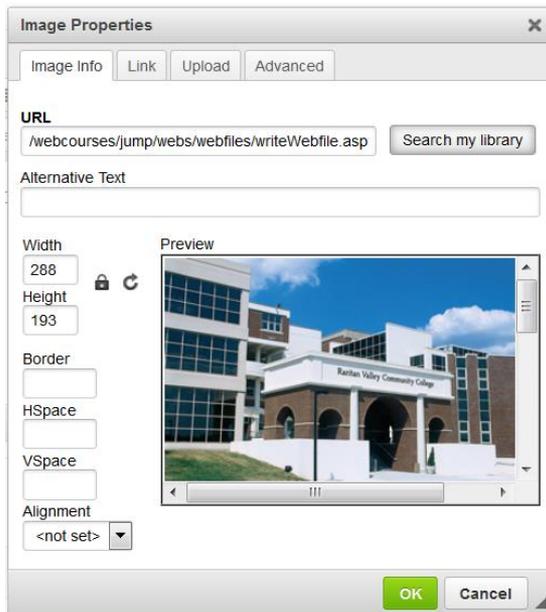
**Border**

**Vertical Space**

**Horizontal Space**

# WebStudy Alt Text

- ▶ WebStudy editor requires users to add Alt Text when inserting an image. If image is decorative, you can check the box which automatically inserts a “” in the HTML code



- ▶ **Tip: You must upload the image into Webfiles before you can insert the image**

# 3 - Lists

- ▶ Be sure to use the actual list icons in your LMS to make lists. This will enable screenreading software to read numbered and bulleted lists appropriately.
- ▶ Avoid typing list numbers or bullets using your keyboard.

Blackboard	Canvas	D2L	Schoology	WebStudy
				

# 4 - Hyperlinks

- ▶ Meaningful hyperlinks help everyone to locate related Websites.
- ▶ Link the name of the item that you want to link instead of using “click here” or a Website address (URL)
- ▶ Bad example: Click Here to go the NASA Website.
- ▶ Good example: Visit the NASA Website for more information about our solar system.
- ▶ If you need to provide the actual URL, add it as plain text after the link as shown below:

NASA Website

(<https://www.nasa.gov/topics/solarsystem/index.html>)

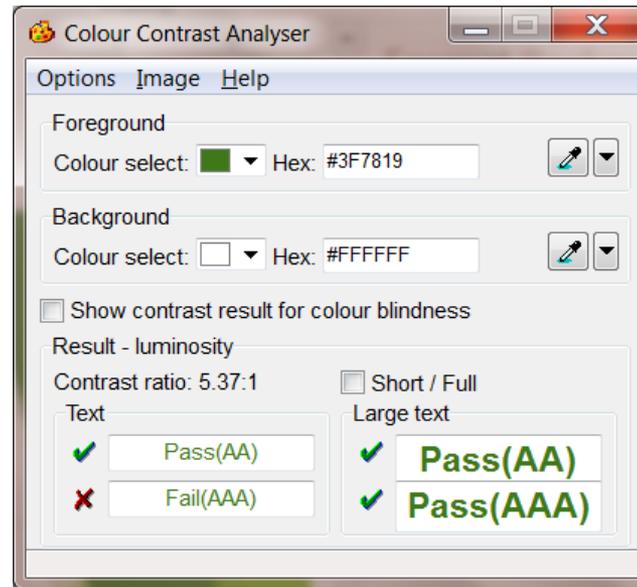
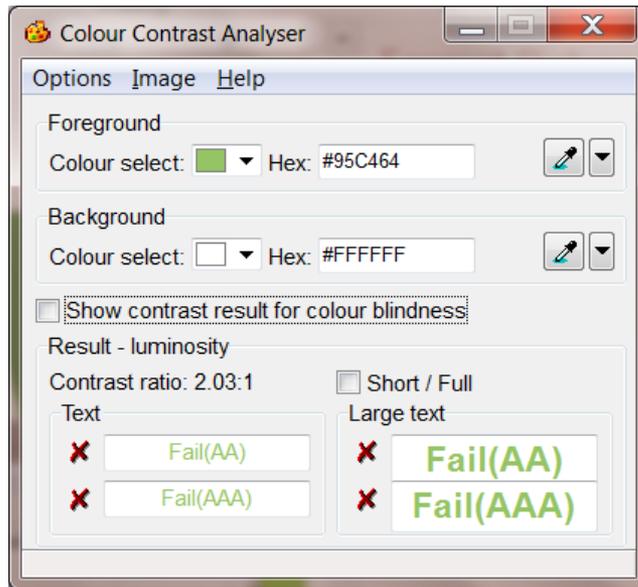
# 5 - Colors & Contrast

- ▶ Use high contrast colors for your course information and Websites (black/white; blue/yellow)
- ▶ Download the [Colour Contrast Analyser](https://www.paciellogroup.com/resources/contrastanalyser/) (<https://www.paciellogroup.com/resources/contrastanalyser/>)
- ▶ This tool provides two useful core functionalities:
  1. a pass/fail assessment against WCAG 2.0 (web content accessibility guidelines) color contrast success criteria
  2. a simulation of three types of color-blindness

**Tip: never use color ALONE to convey information**

# Contrast AA Standards

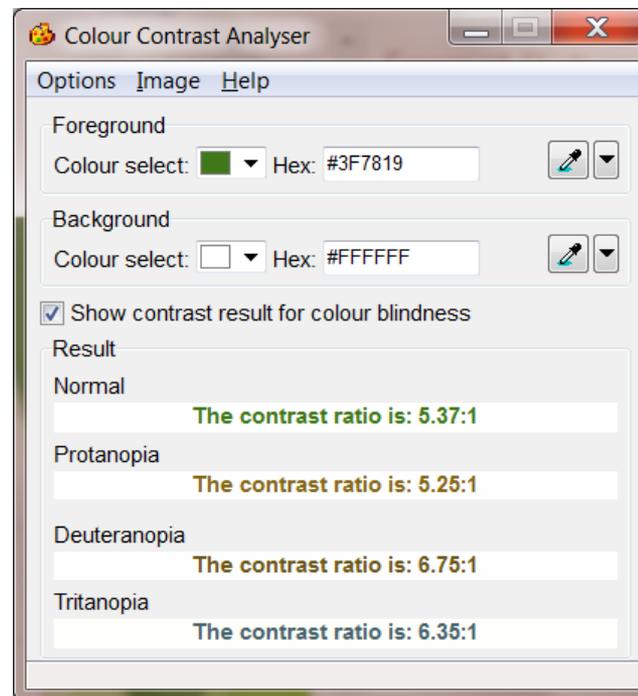
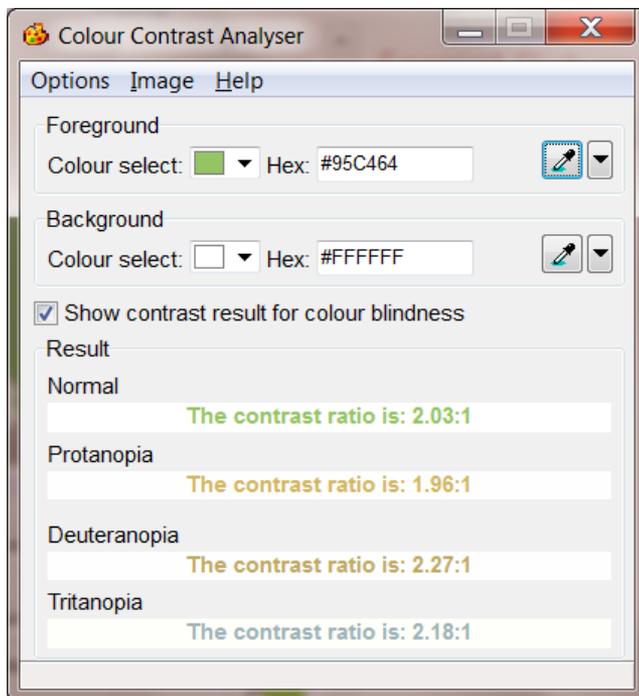
- ▶ Contrast Goal: foreground/background contrast to pass WCAG\* 2.0 AA standards



\*Web Content Accessibility Guidelines

# Colors for Colorblind

- ▶ Color Goal: To be readable by people with color blindness
- ▶ Text or diagrams and their background must have a luminosity contrast ratio of at least 5:1 for level 2 compliance.



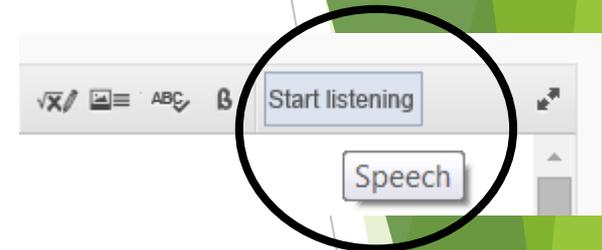
# 6 -Captioning Video

- ▶ Find Videos on YouTube that are already captioned
  - ▶ Type your search term, then a space, then cc
  - ▶ Example: **brain, cc** (for a video on the brain)
  - ▶ Captioned videos will have a “cc” icon below the description 
- ▶ Find out if your publisher videos are captioned
- ▶ Making your own videos? **Ask for captioning help from an instructional designer or media specialist.**

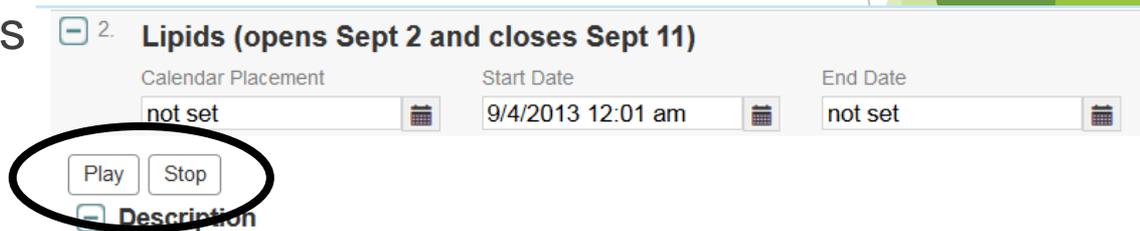
**Tip: Direct students to accessible media players such as the Able Player or the [YouTube HTML5 Video Player](https://www.youtube.com/html5) (<https://www.youtube.com/html5>)**

# Other Features to Look for in your LMS

- ▶ **Speech-to-Text** in Editors (Google Chrome)
  - Types text when user speaks



- ▶ **Text-to-Speech** in Pages (Google Chrome)
  - Reads text to students



- ▶ **ReadSpeaker** has been purchased by RVCC, Camden, and several other NJ county colleges for their LMS software. (text to speech)

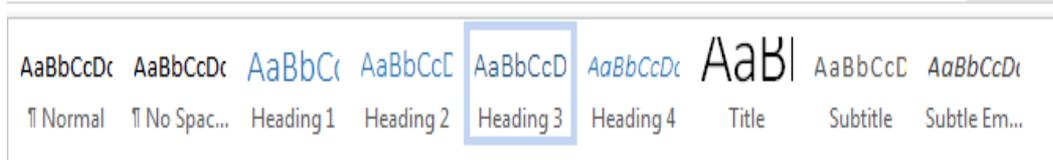


# Easy Ways to Make Word, PPT, and PDF Documents Accessible

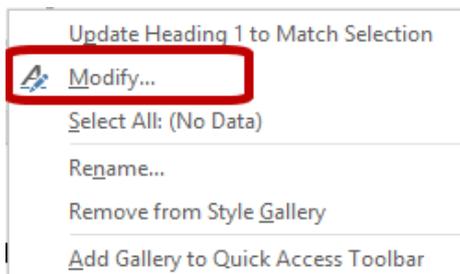
# Microsoft Word: Styles

- ▶ Use Styles to identify important points in a document.
- ▶ **Screen readers use styles to identify the important portions of a text.**
- ▶ Do NOT just make your text larger, bold, or italicized
- ▶ There is no way for a screen reader to know that text is important if it's just bold or larger.
- ▶ Styles also allow you to generate a table of contents.
- ▶ **NEVER use color alone** to make your text stand out.

# Microsoft Word: Headings



- ▶ Heading Styles can be found on the Home tab
  - ▶ The document title should have **Heading1** style
  - ▶ Topic headings should use the **Heading2** style.
  - ▶ Subtopics should use the **Heading3** style
  - ▶ You can always make text larger/bold/italicized **AFTER** you apply the style. (right-click and choose “Modify”)



# Microsoft Word: Lists

- ▶ Always use Word's numbered and bulleted list tools instead of typing in bullets and numbers. Screen readers can recognize lists created using the tools and can therefore identify how many items are in the list ahead of time.

--This

--Is

--Bad

▶ This

▶ Is

▶ Good!

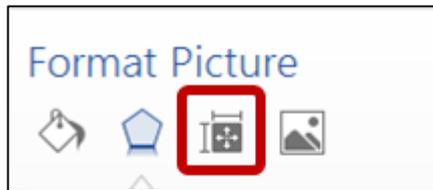


# Microsoft Word: Fonts

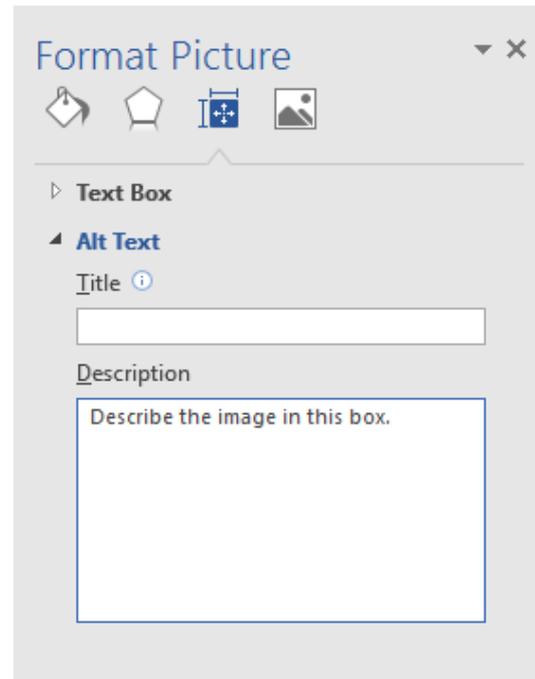
- ▶ If most users will be reading on a screen, use a sans-serif font such as **Arial** or **Verdana**.
- ▶ If most users will be reading a printed copy, use a serif font such as **Times New Roman**.
- ▶ The font size should be 12 points or larger for those who are sight impaired.
- ▶ Don't use more than two different fonts in the same document.

# Microsoft Word: ALT text

- ▶ Screen readers can identify image content if you add ALT text.
- ▶ Right click on an image and choose “format picture”
- ▶ Click on the third icon

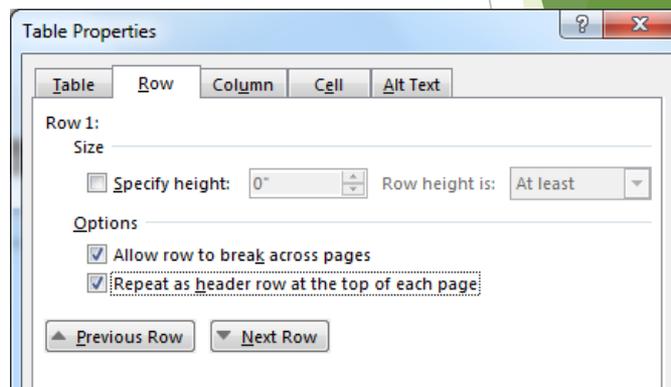


- ▶ Select Alt Text
- ▶ Use the Description box (not the Title box) to describe the image



# Microsoft Word: Tables

- ▶ It is difficult for a screen reader to understand tables.
- ▶ You can identify the header row by highlighting it before right clicking and choosing “table properties”
- ▶ Next, check the box that identifies the row as the header:
- ▶ You can also add alt text to a table.
- ▶ DO NOT split or merge cells. This will change the reading order and make the table confusing.



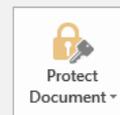
# Microsoft Word: Checks

- ▶ Go to Properties (File tab) to add information about the document's Title, Author, Subject, Keywords, and Language.
- ▶ Properties are utilized by screen readers to identify content in documents.
- ▶ Use Check Accessibility (File tab – Info) to look for missing headings, alt text, table headers, etc.

## Properties ▾

Size	1.92MB
Pages	5
Words	810
Total Editing Time	120 Minutes
Title	Add a title
Tags	Add a tag
Comments	Add comments
Related Dates	
Last Modified	Today, 10:11 AM
Created	Yesterday, 3:18 PM
Printed	7/29/2015 12:15 PM

## Info



### Protect Document

Control what types of changes people



### Inspect Document

Before publishing this file, be aware th

- Document properties and author'
- Content that people with disabili



### 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.

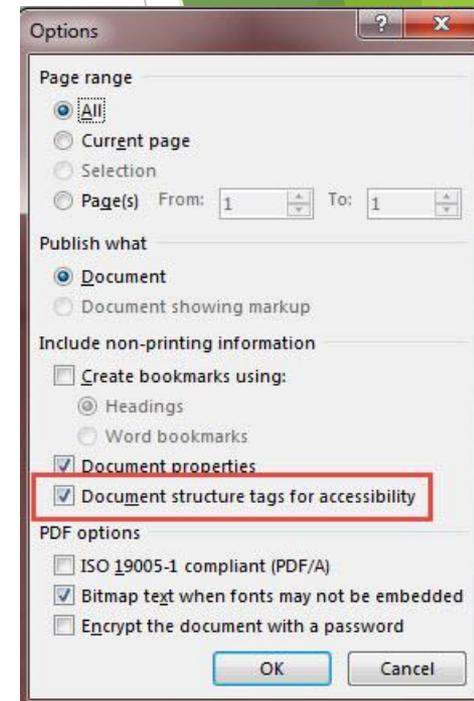
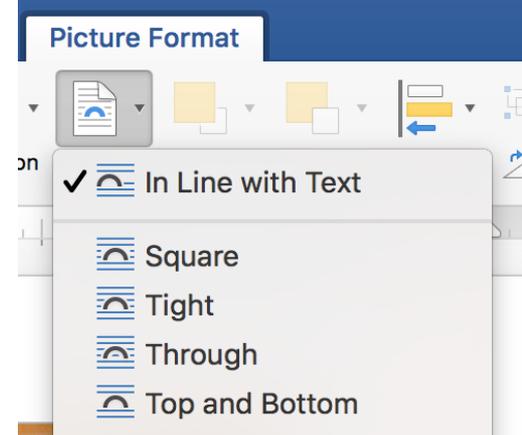


### Check Compatibility

Check for features not supported by earlier versions of Word.

# Microsoft Word: Saving as PDF

- ▶ You can't save an accessible PDF using Word for the Mac 😞
- ▶ Images must be inline so they are part of a screen reader's reading order. Select the Picture Format tab - Wrap text – in Line with Text.
- ▶ Use the **SAVE AS** function. Don't print to a PDF.
- ▶ Select Options and ensure that select "**Document structure tags for accessibility**" is checked



# Microsoft PowerPoint Best Practices

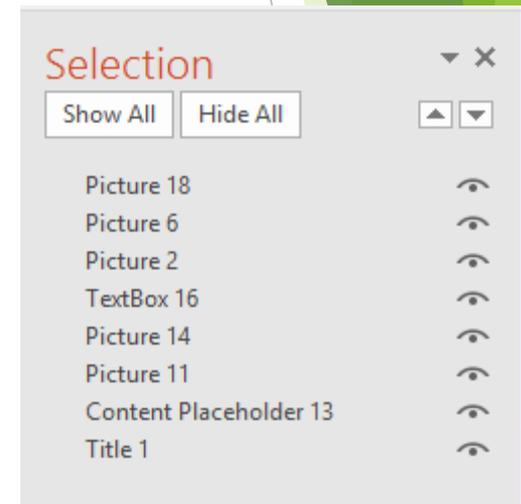
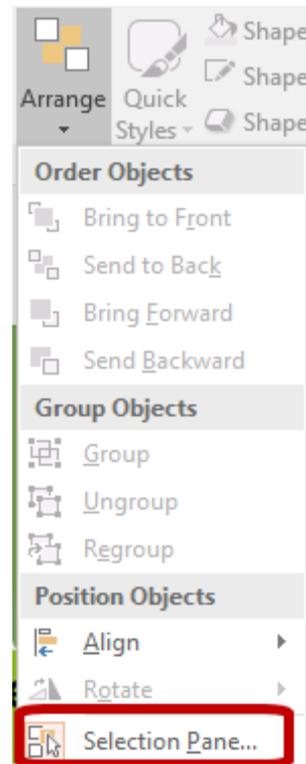
- ▶ Ensure slide titles are relevant.
- ▶ Keep images to a minimum to avoid clutter
- ▶ Avoid distracting sounds and text effects including transitions. (ADHD sensitivity)
- ▶ No more than six bullets per slide
- ▶ One line of text per bullet

# Microsoft PowerPoint More Best Practices

- ▶ Insert Alt Text on Images
- ▶ Avoid adding Textboxes since Outline view won't display the added textbox content
- ▶ Be sure to check the reading order of each slide as you create it

# Microsoft PowerPoint Check Reading Order

- ▶ Check reading order
- ▶ Home Tab – Arrange – Selection Pane
- ▶ List of items in order from **Bottom to Top**
- ▶ Reorder items using drag and drop to correct reading order



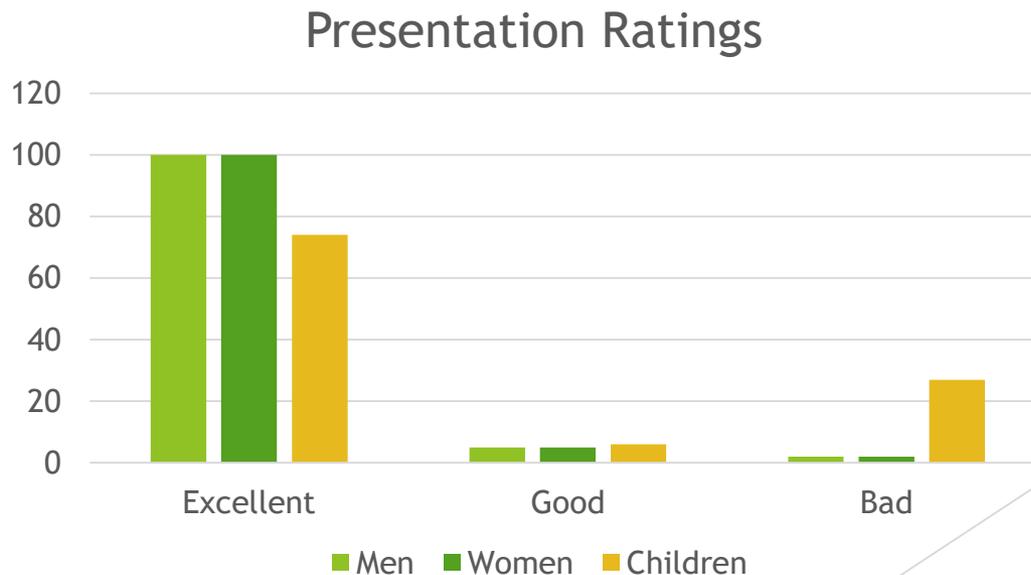
# Microsoft PowerPoint Creating Tables

- ▶ Use Insert - Table and choose the correct numbers of rows and columns. Do not draw the table.
- ▶ Assign column Headers by ensuring the Header Row checkbox is selected



# Microsoft PowerPoint Creating Charts

- ▶ Create charts within PowerPoint whenever possible.
- ▶ You can copy/paste data from Excel into the PPT chart.



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