

This document will help you use the core skills of accessibility when creating project documents, emails, presentations, websites, and videos. Visit the [Accessible U](#) website for complete tutorials and guides.

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Core Skills

Headings and document structure

ACCESSIBLE-USABLE SOLUTION	YES	NO
Screen reader users scan with their ears rather than their eyes; help everyone scan faster by making sure your headers start with keywords (see the discussion about hyperlinks in this document) and use 'official' heading styles.	Use styles (for word processing applications like MS Word or Google Docs) or semantic HTML markup (in web applications) to indicate headers. Make a table of contents like we did in this	DON'T manually change the font size to change the visual layout of your document 

	document while you're at it (you can find it under the Insert drop-down menu at the top)!	
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References

Accessibility

[Headings for content structure \(new window to WebAim\)](#)

Usability

[Headings are pick-up lines \(new window\) nngroup](#)

[How people read on the web - nngroup](#)

Hyperlinks

ACCESSIBLE-USABLE SOLUTION	YES	NO
<p>Embed hyperlinks within words rather than listing out the link. Screen readers will attempt to read all the characters in the hyperlink if you list it out and this is annoying. Additionally, everyone can scan easier with descriptive text as the hyperlink.</p>	<p>Pie-making instructions</p>	<p>Check out these pie-making instructions</p>
<p>Links (and headings) need to be descriptive:</p> <ol style="list-style-type: none"> Describe links so they still make sense out of context. Screen readers read the links separately so a bunch of click-here's doesn't help create context for what they will find if they do click here. 	<p>Pie-making instructions</p> <p>Pie-making instructions (YouTube)</p> <p>Check out these pie-making instructions (video opens in a new window)</p>	<p>Click here for pie-making instructions</p> <p>http://www.thekitchn.com/how-to-make-perfectly-flaky-pie-crust-cooking-lessons-from-the-kitchn-191896</p>

<p>2. Clearly describe the target page, i.e., include an indication of where they're going in the text of the hyperlink (screen reader users need this information to know when a new window or tab has been opened)</p>		
<p>Start with keywords: people who use screen readers scan with their ears, so make sure the main point of the link is at the beginning.</p>	<p>Pie-making instructions (or maybe Pie-making instructions are here)</p>	<p>Here are the pie-making instructions How to make a pie Click here for pie-making instructions</p>
<p>Discrete: don't have more than one link to the same page</p>		
<p>Make sure the anchor text (usually blue underlined links) visually contrasts from non-hyperlinked information</p>	<p>Conventional visual distinction of hyperlinks is basic RGB blue with underline: Pie-making instructions</p>	<p>"Modern"-looking hyperlink styling can be difficult to distinguish for users with low vision: Pie-making instructions</p>

References

Accessibility

[links and hypertext - webaim.org \(new window\)](#)

Usability

[hyperlinks should start with a keyword - nngroup \(new window\)](#)

Bulleted & numbered lists

ACCESSIBLE-USABLE SOLUTION	YES	NO
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<p>Screen readers allow users to listen to a list of lists, making it easier to navigate to and through lists that were created using list markup. Manually created lists cannot be scanned in this way. Again everyone benefits from being able to scan to a list of items, whether visually or with a screen reader.</p>	<p>Use the Numbered Lists and Bulleted Lists buttons</p> 	<p>Don't make your own list order by typing numbers or dashes and adding custom tabs. This type of list cannot be discretely accessed by users of adaptive technologies (and it's a pain to keep adding on your own). Using the 'mark-up' buttons makes it easier to keep your list going too (just press Enter/Return).</p>
<p>Use the right type of list: bullets for true lists, and numbered lists where sequence or number of parts is important.</p>	<p>How to clean the birdcage:</p> <ol style="list-style-type: none"> 1. Gather fresh newspaper 2. Don gloves 3. Replace soiled newspaper with fresh 4. Doff gloves 	<p>How to clean the birdcage:</p> <ul style="list-style-type: none"> ● Gather fresh newspaper ● Don gloves ● Replace soiled newspaper with fresh ● Doff gloves

References

Accessibility

[Lists: Unordered or numbered \(new window to WebAim\)](#)

[List types defined \(new window to Oregon State University\)](#)

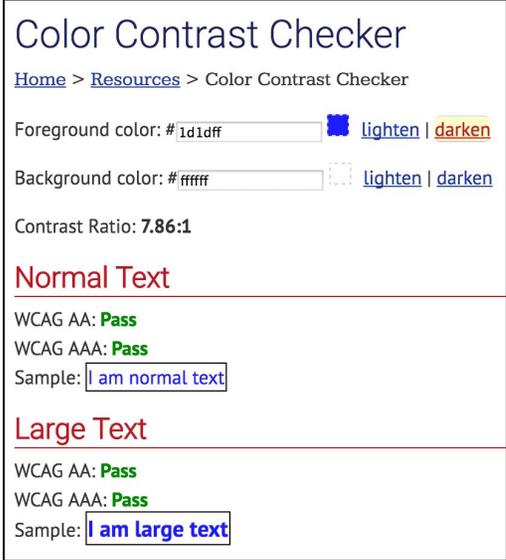
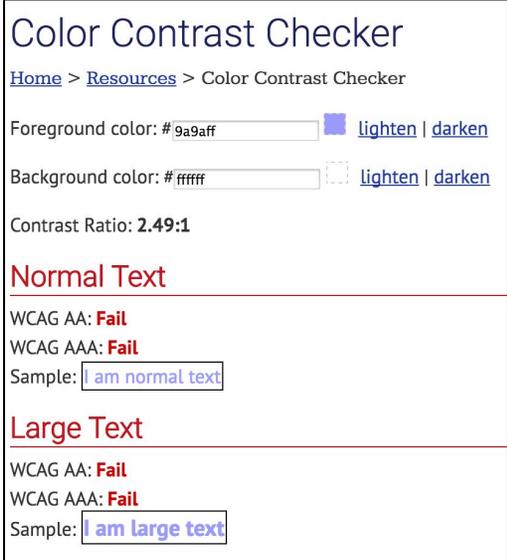
[List comparisons: Sighted vs Screen reader \(new window to Penn State\)](#)

Usability

[Reading on the web - nngroup](#)

Color and contrast

ACCESSIBLE-USABLE SOLUTION	YES	NO
<p>Color should never be the sole means of conveying information. Always use color + bold, color + size, or color + halo or highlight to differentiate text.</p>	<p>I want to emphasize this point. (uses halo/highlight plus color difference)</p> <p>I want to emphasize this point. (uses boldface plus color difference)</p>	<p>I want to emphasize this point. (only uses color)</p>

<p>For non-text graphics (like graphs), color + shape, color + size, color + texture or pattern, or some other means of visually distinguishing information differences.</p>		
<p>Color contrast is measured as a ratio of brightness to darkness, the brightness of a color against the darkness of the color it appears on top of. WCAG 2.0 guidelines specify different contrast ratios depending on the size and weight of the font text. If you're not sure whether your background and foreground colors have adequate contrast, you can compare the two colors using the Webaim.com color accessibility checker (link in the Yes column). You'll need to know the hexadecimal value of the colors in order to perform this check.</p> <p>Or even faster you, can select from among the accessible color palettes at z.umn.edu/accessibleColor</p>	<p>The screenshot (below) shows the webaim.org color contrast checker comparing two colors (pure blue text on pure white background) that conform to the WCAG 2.0 color contrast guidelines at all levels and text sizes:</p> 	<p>This screenshot shows the webaim.org color contrast checker comparing two colors (lavender text on pure white background) that fail the WCAG 2.0 color contrast guidelines at all levels and text sizes.</p> 

References

Accessibility

[Understanding minimum contrast \(WCAG 2.0\)](#)

Usability

[Low-contrast text may be trendy, but it is also illegible, undiscoverable, and inaccessible \(NNGroup\)](#)

Video captions

ACCESSIBLE-USABLE SOLUTION	YES	NO
<p>Creating a script results in fewer um's and ah's, creates a better-paced video, and makes an instant transcript that can also be uploaded as a captioning file.</p> <p>Captions help those deaf or hard of hearing, as well as users watching while working in a busy environment (think Coffman, cubes, labs etc..), or watchers learning the language spoken.</p>	<p>Script writing and captioning should be part of the workflow for creating an instructional video.</p> <p>Watch the first 1:44 min of this screencast that explains the many benefits of writing a script/transcript prior to making a recording for students</p>	<p>Don't just use the captions that YouTube automatically creates. They are a nice start, but be sure to check for accuracy and change as needed.</p>

References

[How to Caption Videos \(YouTube 3:40 min\)](#)

[Why you should caption your videos \(YouTube\) 1:40 min](#)

[Captions and Transcripts \(new window WebAim\)](#)

Alt text (image captions)

ACCESSIBLE-USABLE SOLUTION	YES	NO
<p>Ideal practice is to either incorporate the content of the image into the surrounding text OR create a caption in the design that describes the image's significance. This way both sighted users and screen reader users benefit from the explanation.</p>	<p>Create caption and make sure the alt attribute is blank (so screen reader users don't have to listen to the description twice).</p>	<p>Don't include "picture of _____" in the alt text description, as the screen reader already reads the fact that the image is a picture.</p>

<p>If the content is covered in the surrounding text, you don't need alt text.</p>		
<p>Explain the function and content of the image (no need to write 'image of' screen readers will already know that).</p> <p>Function is whether it is clickable (is it a hyperlink, image map, or button).</p> <p>Content is the information contained in the graphic.</p>	 <p>Title: Hablo Description: Graffiti art in Spanish stating Hablo representing "I speak". We will 'speak' in this course. This picture was taken during my travels to xxxxx.</p>	<p>Image of spray painted Hablo.</p>
<p>Purely decorative images don't need alt text</p>	<p>DO: Use ALT= "" for images that are cosmetic and aren't necessary for learning DO: make sure the ALT attribute and TEXT are the same (example of alt = "printer-friendly version" whereas the text said "Print Answer". Using the search feature for "printer" didn't result in an answer</p>	

References

Accessibility

[Alt text blunders \(new window\) webaim.org](http://webaim.org)

[Alt text details \(new window\) from webaim](#)

Usability

[Image quality importance:eye-tracking research \(new window\)](#)

Resources and Chrome Extension

Testimonials

These two videos offer testimonials and further insight into the experiences of people who use adaptive technologies:

- [University of Minnesota accessibility website](#)
- [People with Disabilities and Computer Technologies \(video opens in a new window\)](#) 11:33 minutes
- [The Electronic Curb Cut \(video from Office of Enterprise Technology State of Minnesota\)](#) 16 minutes
- [Electronic Accessibility \(new window to University of Montana\)](#)
- [Accessibility and Usability \(new window to Penn State\)](#)

Chrome Apps/Extensions to text accessibility

- Collusion - alt text accessibility
- HeadingsMap - Testing for keyboard navigation
- Chrome Lens - testing for color blindness