

Principle 1: Perceivable

Web content is made available to the senses - sight, hearing, and/or touch

Guideline 1.1 Text Alternatives

Provide text alternatives for any non-text content

Success Criteria	Recommendations
<u>1.1.1 Non-text Content</u> (Level A)	<ul style="list-style-type: none"> <input type="checkbox"/> All images, form image buttons, and image map hot spots have appropriate, equivalent alternative text. <input type="checkbox"/> Images that do not convey content, are decorative, or contain content that is already conveyed in text are given null alt text (alt="") or implemented as CSS backgrounds. All linked images have descriptive alternative text. <input type="checkbox"/> Equivalent alternatives to complex images are provided in context or on a separate linked page. <input type="checkbox"/> Form buttons have a descriptive value. <input type="checkbox"/> Form inputs have associated text labels. <input type="checkbox"/> Embedded multimedia is identified via accessible text. <input type="checkbox"/> Frames and iframes are appropriately titled.

Guideline 1.2 Time-based Media

Provide alternatives for time-based media

NOTE: If the audio or video is designated as an alternative to web content (e.g., an audio or sign language version of a web page, for example), then the web content itself serves as the alternative.

Success Criteria	Recommendations
<u>1.2.1 Prerecorded Audio-only and Video-only</u> (Level A)	<ul style="list-style-type: none"> <input type="checkbox"/> A descriptive text transcript that includes relevant auditory content is provided for non-live audio-only (audio podcasts, MP3 files, etc.). <input type="checkbox"/> A descriptive text transcript or audio description is provided for non-live video-only (e.g., video that has no audio track), unless the video is decorative.
<u>1.2.2 Captions</u> (Prerecorded) (Level A)	<ul style="list-style-type: none"> <input type="checkbox"/> Synchronized captions are provided for non-live video (YouTube videos, etc.).
<u>1.2.3 Audio Description or Media Alternative</u> (Prerecorded) (Level A)	<ul style="list-style-type: none"> <input type="checkbox"/> A descriptive text transcript OR audio description track is provided for non-live video. NOTE: Only required if the video conveys content visually that is not presented via the audio track.
<u>1.2.4 Captions</u> (Live) (Level AA)	<ul style="list-style-type: none"> <input type="checkbox"/> Synchronized captions are provided for all live multimedia that contains audio (audio-only broadcasts, web casts, video conferences, etc.)
<u>1.2.5 Audio Description</u> (Prerecorded) (Level AA)	<ul style="list-style-type: none"> <input type="checkbox"/> Audio descriptions are provided for all video content. NOTE: Only required if the video conveys content visually that is not presented via the audio track. <input type="checkbox"/> While not required at level AA, WebAIM recommends descriptive transcripts instead of or in addition to audio descriptions for optimal accessibility.
<u>1.2.6 Sign Language</u> (Prerecorded) (Level AAA)	<ul style="list-style-type: none"> <input type="checkbox"/> A sign language video is provided for all media content that contains audio.

<u>1.2.7 Extended Audio Description (Prerecorded)</u> (Level AAA)	<input type="checkbox"/> When audio description cannot be added to video due to audio timing (e.g., insufficient pauses in the audio), an alternative version of the video with pauses that allow audio descriptions is provided.
<u>1.2.8 Media Alternative (Prerecorded)</u> (Level AAA)	<input type="checkbox"/> A descriptive text transcript is provided for all pre-recorded media that has a video track. For optimal accessibility, WebAIM strongly recommends transcripts for all multimedia content.
<u>1.2.9 Audio-only (Live)</u> (Level AAA)	<input type="checkbox"/> A descriptive text transcript (e.g., the script of the live audio) is provided for all live content that has audio.

Guideline 1.3 Adaptable:

Create content that can be presented in different ways (e.g., simpler layout) without losing information or structure

Success Criteria	Recommendations
<u>1.3.1 Info and Relationships</u> (Level A)	<input type="checkbox"/> Semantic markup is used to designate headings (<h1>), regions/landmarks, lists (, , and <dl>), emphasized or special text (, <code>, <abbr>, <blockquote>, for example), etc. Semantic markup is used appropriately. <input type="checkbox"/> Tables are used for tabular data and data cells are associated with their headers. Data table captions, if present, are associated to data tables. <input type="checkbox"/> Text labels are associated with form input elements. Related form elements are grouped with fieldset/legend. ARIA labelling may be used when standard HTML is insufficient.
<u>1.3.2 Meaningful Sequence</u> (Level A)	<input type="checkbox"/> The reading and navigation order (determined by code order) is logical and intuitive.
<u>1.3.3 Sensory Characteristics</u> (Level A)	<input type="checkbox"/> Instructions do not rely upon shape, size, or visual location (e.g., "Click the square icon to continue" or "Instructions are in the right-hand column"). <input type="checkbox"/> Instructions do not rely upon sound (e.g., "A beeping sound indicates you may continue.").
<u>1.3.4 Orientation</u> (WCAG 2.1 Level AA)	<input type="checkbox"/> Orientation of web content is not restricted to only portrait or landscape, unless a specific orientation is necessary.
<u>1.3.5 Identify Input Purpose</u> (WCAG 2.1 Level AA)	<input type="checkbox"/> Input fields that collect certain types of user information have an appropriate autocomplete attribute defined.
<u>1.3.6 Identify Purpose</u> (WCAG 2.1 Level AAA)	<input type="checkbox"/> HTML5 regions or ARIA landmarks are used to identify page regions. <input type="checkbox"/> ARIA is used, where appropriate, to enhance HTML semantics to better identify the purpose of interface components.

Guideline 1.4 Distinguishable:

Make it easier for users to see and hear content including separating foreground from background

Success Criteria	Recommendations
<u>1.4.1 Use of Color</u> (Level A)	<input type="checkbox"/> Color is not used as the sole method of conveying content or distinguishing visual elements. <input type="checkbox"/> Color alone is not used to distinguish links from surrounding text unless the contrast ratio between the link and the surrounding text is at least 3:1 and an additional distinction (e.g., underline) is provided when the link is hovered and receives focus.
<u>1.4.2 Audio Control</u> (Level A)	<input type="checkbox"/> A mechanism is provided to stop, pause, mute, or adjust volume for audio that automatically plays on a page for more than 3 seconds.

<p><u>1.4.3 Contrast (Minimum)</u> (Level AA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Text and images of text have a contrast ratio of at least 4.5:1. <input type="checkbox"/> Large text - at least 18 point (typically 24px) or 14 point (typically 18.66px) and bold - has a contrast ratio of at least 3:1.
<p><u>1.4.4 Resize text</u> (Level AA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> The page is readable and functional when the page is zoomed to 200%. NOTE: 1.4.10 (below) introduces a much higher requirement for zoomed content.
<p><u>1.4.5 Images of Text</u> (Level AA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> If the same visual presentation can be made using text alone, an image is not used to present that text.
<p><u>1.4.6 Contrast (Enhanced)</u> (Level AAA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Text and images of text have a contrast ratio of at least 7:1. <input type="checkbox"/> Large text - at least 18 point (typically 24px) or 14 point (typically 18.66px) bold - has a contrast ratio of at least 4.5:1.
<p><u>1.4.7 Low or No Background Audio</u> (Level AAA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Audio with speech has no or very low background noise so the speech is easily distinguished.
<p><u>1.4.8 Visual Presentation</u> (Level AAA)</p>	<p>Blocks of text over one sentence in length:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Are no more than 80 characters wide. <input type="checkbox"/> Are NOT fully justified (aligned to both the left and the right margins). <input type="checkbox"/> Have adequate line spacing (at least 1/2 the height of the text) and paragraph spacing (1.5 times line spacing). <input type="checkbox"/> Have a specified foreground and background color. These can be applied to specific elements or to the entire page using CSS (and thus inherited by all other elements). <input type="checkbox"/> Do NOT require horizontal scrolling when the text size is doubled.
<p><u>1.4.9 Images of Text (No Exception)</u> (Level AAA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Text is used within an image only for decoration (image does not convey content) OR when the information cannot be presented with text alone.
<p><u>1.4.10 Reflow</u> (WCAG 2.1 Level AA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No loss of content or functionality occurs and horizontal scrolling is avoided when content is presented at a width of 320 pixels. <ul style="list-style-type: none"> o This requires responsive design for most web sites. This is best tested by setting the browser window to 1280 pixels wide and then zooming the page content to 400%. <input type="checkbox"/> Content that requires horizontal scrolling, such as data tables, complex images (such as maps and charts), toolbars, etc. are exempted.
<p><u>1.4.11 Non-text Contrast</u> (WCAG 2.1 Level AA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> A contrast ratio of at least 3:1 is present for differentiating graphical objects (such as icons and components of charts or graphs) and author-customized interface components (such as buttons, form controls, and focus indicators/outlines). <input type="checkbox"/> The various states (focus, hover, active, etc.) of author-customized interactive components must all present 3:1 contrast.
<p><u>1.4.12 Text Spacing</u> (WCAG 2.1 Level AA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No loss of content or functionality occurs when the user adapts text line height/spacing to 1.5 times the font size, paragraph spacing to 2 times the font size, word spacing to .16 times the font size, and letter spacing to .12 times the font size. <input type="checkbox"/> This is best supported by avoiding pixel height definitions for elements that contain text.
<p><u>1.4.13 Content on Hover or Focus</u> (WCAG 2.1 Level AA)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> When additional content is presented on hover or keyboard focus: <ul style="list-style-type: none"> <input type="checkbox"/> The newly revealed content can be dismissed (generally via the Esc key) without moving the pointer or keyboard focus, unless the content presents an input error or does not obscure or interfere with other page content. <input type="checkbox"/> The pointer can be moved to the new content without the content disappearing. <input type="checkbox"/> The new content must remain visible until the pointer or keyboard focus is moved away from the triggering control, the new content is dismissed, or the new content is no longer relevant.

Principle 2: Operable

Interface forms, controls, and navigation are operable

Guideline 2.1 Keyboard Accessible:

Make all functionality available from a keyboard

Success Criteria	Recommendations
<u>2.1.1 Keyboard</u> (Level A)	<ul style="list-style-type: none"><input type="checkbox"/> All page functionality is available using the keyboard, unless the functionality cannot be accomplished in any known way using a keyboard (e.g., free hand drawing).<input type="checkbox"/> Page-specified shortcut keys and accesskeys (accesskey should typically be avoided) do not conflict with existing browser and screen reader shortcuts.
<u>2.1.2 No Keyboard Trap</u> (Level A)	<ul style="list-style-type: none"><input type="checkbox"/> Keyboard focus is never locked or trapped at one particular page element. The user can navigate to and from all navigable page elements using only a keyboard.
<u>2.1.3 Keyboard</u> (No Exception) (Level AAA)	<ul style="list-style-type: none"><input type="checkbox"/> All page functionality is available using the keyboard.
<u>2.1.4 Character Key Shortcuts</u> (WCAG 2.1 Level A)	<ul style="list-style-type: none"><input type="checkbox"/> If a keyboard shortcut uses printable character keys, then the user must be able to disable the key command, change the defined key to a non-printable key (Ctrl, Alt, etc.), or only activate the shortcut when an associated interface component or button is focused.

Guideline 2.2 Enough Time:

Provide users enough time to read and use content

Success Criteria	Recommendations
<u>2.2.1 Timing Adjustable</u> (Level A)	<ul style="list-style-type: none"><input type="checkbox"/> If a page or application has a time limit, the user is given options to turn off, adjust, or extend that time limit. This is not a requirement for real-time events (e.g., an auction), where the time limit is absolutely required, or if the time limit is longer than 20 hours.
<u>2.2.2 Pause, Stop, Hide</u> (Level A)	<ul style="list-style-type: none"><input type="checkbox"/> Automatically moving, blinking, or scrolling content (such as carousels, marquees, or animations) that lasts longer than 5 seconds can be paused, stopped, or hidden by the user.<input type="checkbox"/> Automatically updating content (e.g., a dynamically-updating news ticker, chat messages, etc.) can be paused, stopped, or hidden by the user or the user can manually control the timing of the updates.
<u>2.2.3 No Timing</u> (Level AAA)	<ul style="list-style-type: none"><input type="checkbox"/> The content and functionality have no time limits or constraints.
<u>2.2.4 Interruptions</u> (Level AAA)	<ul style="list-style-type: none"><input type="checkbox"/> Interruptions (alerts, page updates, etc.) can be postponed or suppressed by the user.
<u>2.2.5 Re-authenticating</u> (Level AAA)	<ul style="list-style-type: none"><input type="checkbox"/> If an authentication session expires, the user can re-authenticate and continue the activity without losing any data from the current page.
<u>2.2.6 Timeouts</u> (WCAG 2.1 Level AAA)	<ul style="list-style-type: none"><input type="checkbox"/> Users must be warned of any timeout that could result in data loss, unless the data is preserved for longer than 20 hours of user inactivity.

Guideline 2.3 Seizures:

Do not design content in a way that is known to cause seizures or physical reactions

Success Criteria	Recommendations
<u>2.3.1 Three Flashes or Below Threshold</u> (Level A)	<input type="checkbox"/> No page content flashes more than 3 times per second unless that flashing content is sufficiently small and the flashes are of low contrast and do not contain too much red.
<u>2.3.2 Three Flashes</u> (Level AAA)	<input type="checkbox"/> No page content flashes more than 3 times per second.
<u>2.3.3 Animation from Interactions</u> (WCAG 2.1 Level AAA)	<input type="checkbox"/> Users can disable non-essential animation and movement that is triggered by user interaction.

Guideline 2.4 Navigable:

Provide ways to help users navigate, find content, and determine where they are

Success Criteria	Recommendations
<u>2.4.1 Bypass Blocks</u> (Level A)	<input type="checkbox"/> A link is provided to skip navigation and other page elements that are repeated across web pages. <input type="checkbox"/> A proper heading structure and/or identification of page regions/landmarks may be considered a sufficient technique. Because navigating by headings or regions is not supported in most browsers, WebAIM recommends a "skip" link (in addition to headings and regions) to best support sighted keyboard users.
<u>2.4.2 Page Titled</u> (Level A)	<input type="checkbox"/> The web page has a descriptive and informative page title.
<u>2.4.3 Focus Order</u> (Level A)	<input type="checkbox"/> The navigation order of links, form elements, etc. is logical and intuitive.
<u>2.4.4 Link Purpose (In Context)</u> (Level A)	<input type="checkbox"/> The purpose of each link (or form image button or image map hotspot) can be determined from the link text alone, or from the link text and its context (e.g., surrounding text, list item, table cell, or table headers). <input type="checkbox"/> Links (or form image buttons) with the same text that go to different locations are readily distinguishable.
<u>2.4.5 Multiple Ways</u> (Level AA)	<input type="checkbox"/> Multiple ways are available to find other web pages on the site - at least two of: a list of related pages, table of contents, site map, site search, or list of all available web pages.
<u>2.4.6 Headings and Labels</u> (Level AA)	<input type="checkbox"/> Page headings and labels for form and interactive controls are informative. Avoid duplicating heading (e.g., "More Details") or label text (e.g., "First Name") unless the structure provides adequate differentiation between them.
<u>2.4.7 Focus Visible</u> (Level AA)	<input type="checkbox"/> It is visually apparent which page element has the current keyboard focus (i.e., as you tab through the page, you can see where you are).
<u>2.4.8 Location</u> (Level AAA)	<input type="checkbox"/> If a web page is part of a sequence of pages or within a complex site structure, an indication of the current page location is provided, for example, through breadcrumbs or specifying the current step in a sequence (e.g., "Step 2 of 5 - Shipping Address").
<u>2.4.9 Link Purpose (Link Only)</u> (Level AAA)	<input type="checkbox"/> The purpose of each link (or form image button or image map hotspot) can be determined from the link text alone. <input type="checkbox"/> There are no links (or form image buttons) with the same text that go to different locations.

<u>2.4.10 Section Headings</u> (Level AAA)	<input type="checkbox"/> Beyond providing an overall document structure, individual sections of content are designated using headings, where appropriate.
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Guideline 2.5 Input Modalities:

Make it easier for users to operate functionality through various inputs beyond keyboard

Success Criteria	Recommendations
<u>2.5.1 Pointer Gestures</u> (WCAG 2.1 Level A)	<input type="checkbox"/> If multipoint or path-based gestures (such as pinching, swiping, or dragging across the screen) are not essential to the functionality, then the functionality can also be performed with a single point activation (such as activating a button).
<u>2.5.2 Pointer Cancellation</u> (WCAG 2.1 Level A)	<input type="checkbox"/> To help avoid inadvertent activation of controls, avoid non-essential down-event (e.g., onmousedown) activation when clicking, tapping, or long pressing the screen. Use onclick, onmouseup, or similar instead. If onmouseup (or similar) is used, you must provide a mechanism to abort or undo the action performed.
<u>2.5.3 Label in Name</u> (WCAG 2.1 Level A)	<input type="checkbox"/> If an interface component (link, button, etc.) presents text (or images of text), the accessible name (label, alternative text, aria-label, etc.) for that component must include the visible text.
<u>2.5.4 Motion Actuation</u> (WCAG 2.1 Level A)	<input type="checkbox"/> Functionality that is triggered by moving the device (such as shaking or panning a mobile device) or by user movement (such as waving to a camera) can be disabled and equivalent functionality is provided via standard controls like buttons.
<u>2.5.5 Target Size</u> (WCAG 2.1 Level AAA)	<input type="checkbox"/> Clickable targets are at least 44 by 44 pixels in size unless an alternative target of that size is provided, the target is inline (such as a link within a sentence), the target is not author-modified (such as a default checkbox), or the small target size is essential to the functionality.
<u>2.5.6 Concurrent Input Mechanisms</u> (WCAG 2.1 Level AAA)	<input type="checkbox"/> Content does not restrict input to a specific modality, such as touch-only or keyboard-only, but must support alternative inputs (such as using a keyboard on a mobile device).

Principle 3: Understandable

Information and the operation of user interface must be understandable.

Guideline 3.1 Readable:

Make text content readable and understandable

Success Criteria	Recommendations
<u>3.1.1 Language of Page</u> (Level A)	<input type="checkbox"/> The language of the page is identified using the HTML lang attribute (e.g., <html lang="en">).
<u>3.1.2 Language of Parts</u> (Level AA)	<input type="checkbox"/> The language of page content that is in a different language is identified using the lang attribute (e.g., <blockquote lang="es">).
<u>3.1.3 Unusual Words</u> (Level AAA)	<input type="checkbox"/> Words that may be ambiguous, unfamiliar, or used in a very specific way are defined through adjacent text, a definition list, a glossary, or other suitable method.
<u>3.1.4 Abbreviations</u> (Level AAA)	<input type="checkbox"/> The meaning of an unfamiliar abbreviation is provided by expanding it the first time it is used, using the <abbr> element, or linking to a definition or glossary.

<u>3.1.5 Reading Level</u> (Level AAA)	<input type="checkbox"/> A more understandable alternative is provided for content that is more advanced than can be reasonably read by a person with roughly 9 years of primary education.
<u>3.1.6 Pronunciation</u> (Level AAA)	<input type="checkbox"/> If the pronunciation of a word is vital to understanding that word, its pronunciation is provided immediately following the word or via a link or glossary.

Guideline 3.2 Predictable:

Make Web pages appear and operate in predictable ways

Success Criteria	Recommendations
<u>3.2.1 On Focus</u> (Level A)	<input type="checkbox"/> When a page element receives focus, it does not result in a substantial change to the page, the spawning of a pop-up window, an additional change of keyboard focus, or any other change that could confuse or disorient the user.
<u>3.2.2 On Input</u> (Level A)	<input type="checkbox"/> When a user inputs information or interacts with a control, it does not result in a substantial change to the page, the spawning of a pop-up window, an additional change of keyboard focus, or any other change that could confuse or disorient the user unless the user is informed of the change ahead of time.
<u>3.2.3 Consistent Navigation</u> (Level AA)	<input type="checkbox"/> Navigation links that are repeated on web pages do not change order when navigating through the site.
<u>3.2.4 Consistent Identification</u> (Level AA)	<input type="checkbox"/> Elements that have the same functionality across multiple web pages are consistently identified. For example, a search box at the top of the site should always be labeled the same way.
<u>3.2.5 Change on Request</u> (Level AAA)	<input type="checkbox"/> Substantial changes to the page, the spawning of pop-up windows, uncontrolled changes of keyboard focus, or any other change that could confuse or disorient the user must be initiated by the user. Alternatively, the user is provided an option to disable such changes.

Guideline 3.3 Input Assistance:

Help users avoid and correct mistakes

Success Criteria	Recommendations
<u>3.3.1 Error Identification</u> (Level A)	<input type="checkbox"/> Required form elements or form elements that require a specific format, value, or length provide this information within the element's label. <input type="checkbox"/> Form validation errors are efficient, intuitive, and accessible. The error is clearly identified, quick access to the problematic element is provided, and the user can easily fix the error and resubmit the form.
<u>3.3.2 Labels or Instructions</u> (Level A)	<input type="checkbox"/> Sufficient labels, cues, and instructions for required interactive elements are provided via instructions, examples, properly positioned form labels, and/or fieldsets/legends.
<u>3.3.3 Error Suggestion</u> (Level AA)	<input type="checkbox"/> If an input error is detected (via client-side or server-side validation), suggestions are provided for fixing the input in a timely and accessible manner.
<u>3.3.4 Error Prevention</u> (Legal, Financial, Data) (Level AA)	<input type="checkbox"/> If the user can change or delete legal, financial, or test data, the changes/deletions can be reversed, verified, or confirmed.
<u>3.3.5 Help</u> (Level AAA)	<input type="checkbox"/> Instructions and cues are provided in context to help in form completion and submission.
<u>3.3.6 Error Prevention</u> (All) (Level AAA)	<input type="checkbox"/> If the user can submit information, the submission is reversible, verified, or confirmed.

Principle 4: Robust

Content can be used reliably by a wide variety of user agents, including assistive technologies

Guideline 4.1 Compatible:

Maximize compatibility with current and future user agents, including assistive technologies

Success Criteria	Recommendations
<u>4.1.1 Parsing</u> (Level A)	<input type="checkbox"/> Significant HTML/XHTML validation/parsing errors are avoided.
<u>4.1.2 Name, Role, Value</u> (Level A)	<input type="checkbox"/> Markup is used in a way that facilitates accessibility. This includes following the HTML/XHTML specifications and using forms, form labels, frame titles, etc. appropriately. <input type="checkbox"/> ARIA is used appropriately to enhance accessibility when HTML is not sufficient.
<u>4.1.3 Status Messages</u> (WCAG 2.1 Level AA)	<input type="checkbox"/> If an important status message is presented and focus is not set to that message, the message must be announced to screen reader users, typically via an ARIA alert or live region.

Available online at: webaim.org/standards/wcag/checklist

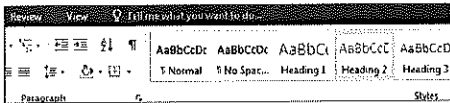


CREATING ACCESSIBLE MICROSOFT WORD 2016 DOCUMENTS (WINDOWS)

Heading Styles

Create a uniform heading structure through use of styles in Word. This allows screen readers to navigate a document and improves accessibility for everyone.

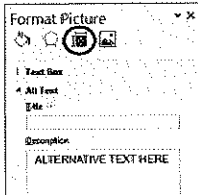
1. Start a new line to create a heading, or select text to change to a heading.
2. Open the **Home** tab, and choose the appropriate heading in the **Styles** panel.
3. Headings 1, 2, or 3 can also be assigned using **Ctrl + Alt + 1, 2, or 3**, respectively.



Alternative Text

Images can be given appropriate alternative text in Word. Alt text is read by a screen reader in a Word file and should remain intact when exporting to HTML or PDF.

1. Right-click on the image and select **Format Picture**. A dialog will appear.
2. Select the **Layout & Properties** icon and choose **Alt Text**.
3. Enter appropriate alt text only in the **Description** field (not the **Title** field).

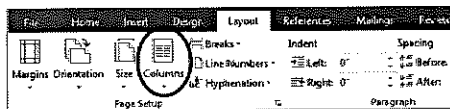


See webaim.org/techniques/alttext for more information.

Columns

Always use true columns. Don't create columns with **Tab**.

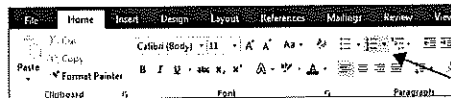
1. Select the **Layout** tab on the ribbon.
2. Select **Columns** in the **Page Setup** group.
3. Choose the number of columns.



Lists

Use **true numbered and bulleted lists** to emphasize a point or a sequence of steps.

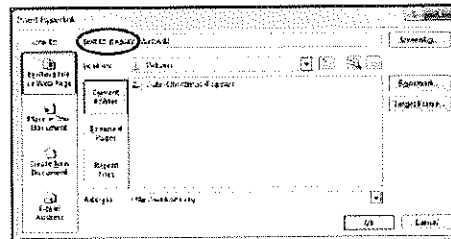
1. Select the **Home** tab on the ribbon.
2. Choose the **Numbered List** or **Bulleted List** option from the **Paragraph** group.



Hyperlinks

Word **automatically creates a hyperlink** when a user pastes a full URL onto a page. These may not make sense to screen reader users, so make sure the link text is unique.

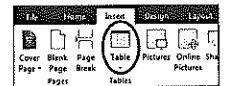
1. Select a hyperlink, right click, and select **Hyperlink** or hit **Ctrl + k**.
2. Change the text in the **Text to Display** field to a more meaningful description.



Data Tables

Accessible tables need a **clear table structure** and **table headers** to help guide a screen reader user.

1. Select the **Insert** tab on the ribbon, then select **Table > Insert Table**.
2. To add table headers to the first row, select **Table Tools > Layout** on the ribbon, then choose the **Repeat Header Rows** option in the **Data** section.



Options in the **Design** tab may be used to change appearance but will not provide the necessary accessibility information.

Accessibility Checker

Word includes an accessibility resource that **identifies accessibility issues**.

1. Select **File > Info > Check for Issues > Check Accessibility**.
2. The checker presents accessibility errors, warnings, and tips for making repairs.

Select specific issues to see **Additional Information** at the bottom of the task pane.



Other Principles

- Ensure that font size is sufficient, around **12 points**.
- Provide sufficient **contrast**.
- Don't use color as **the only way** to convey meaning.
- Provide a **table of contents** for long documents.
- Use **simple** language.

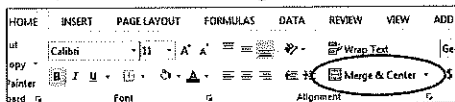


CREATING ACCESSIBLE SPREADSHEETS IN MICROSOFT EXCEL 2010/13 (WINDOWS) & 2011 (MAC)

Screen readers and Excel

Users who are blind rely on software called a screen reader to interact with spreadsheets.

- Screen readers will *read the cell number* as users navigate from cell to cell (e.g., "Grand Total A 23").
- Spanned cells will be identified by a screen reader (e.g., "Budget A1 through G1"). If content spans multiple cells visually, *these cells should be merged*. To merge cells, select *Home* and the *Merge* menu.



Merged cells should not be used in tables. They can be confusing for screen reader users who expect one row and/or column header for each cell.

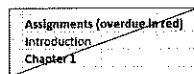
- A screen reader user will usually *start with the first cell (A1)*, so this is a good place to put important information about the sheet.
- Be careful with *empty rows and columns*. While they may sometimes be necessary to visually separate data, *they can cause a screen reader user to think the sheet has ended*, even when it has not.

Images and Charts

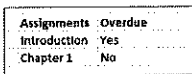
- While images can be given alternative text in the same way as other Office tools (see other cheatsheets), they can sometimes *introduce reading order issues* and should typically *not be added to spreadsheets*.
- *Charts cannot be given alternative text*. Ensure the data used to create the chart is available and clearly structured, and preferably precedes the chart.

Other principles

- *Spell check is not automatic* as it is in Word/PowerPoint. Make sure to spell check each sheet.
- *Do not use color alone to convey information*.



Inaccessible



Accessible

Table 'Headers'

If your spreadsheet includes tables, there is a special way to *add table 'header' information* that will be read by the screen reader. Tables can be identified with formula names of *Title*, *TitleRegion*, and others.

- These formulas *do not update when the table changes*, so be sure your table is complete first.
- This *only works for a single level of headers*. Complex tables will need to be simplified or restructured.

One table per sheet:

For sheets with one table only, select the cell in the *upper-left corner of the table* (not the table title).

	A	B	C
1	Contact info	← NOT HERE	
2	HERE	Phone	Email
3	Ellen Hardy	812.168.1569	ellen.hardy@un
4	Jay Garrett	620.669.1752	jay.garrett@un
5	Steve Pratt	681.227.6247	steve.pratt@un

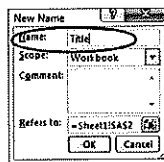
In *Windows*, select *Formulas > Define Name* and the *New Name* dialog opens. In *Mac*, select *Insert > Name > Define* and the *Define Name* dialog opens.

In the *Name* field, replace the existing text with *one of the following 3 values*, depending on your table layout:

If the table has *column and row headers*, enter *Title*

If the table has *row headers only*, enter *RowTitle*

If the table has *column headers only*, enter *ColumnTitle*



Don't Confuse "Column" and "Row" headers. Remember that *ColumnTitle* is for *vertical* headers and *RowTitle* is for *horizontal* headers. Also be sure to type *RowTitle* or *ColumnTitle* as one word, *without a space*.

After entering the correct value in the *Name* field, select *Ok*. Although the initial text is still visible, accessibility information has been added for a screen reader user.

Only add a *Name* to the first cell in the table. *Do not repeat this step* for other header cells within the same table.



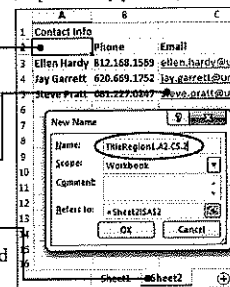
Multiple tables per sheet:

If a single sheet has *multiple tables*, if the table has *sortable columns*, or if you want to specify an *explicit beginning and end* of a table, you need to use *TitleRegion*.

Select the cell in the *upper-left corner of the table* (not the table title). In *Windows*, select *Formulas > Define Name* and the *New Name* dialog opens. In *Mac*, select *Insert > Name > Define* and the *Define Name* dialog opens.

In the *Name* field, enter *TitleRegion* followed by the *following 4 values* (no spaces, separated by periods):

1. Unique number within the sheet (e.g., *1* for the first table)
2. First (upper-left) cell in the table (e.g., *A2*)
3. Last (lower-right) cell in the table (e.g., *C5*)
4. Sheet number (e.g., *2* for the second tab in the workbook)



The above table *Name* would be *TitleRegion1.A2.C5.2*

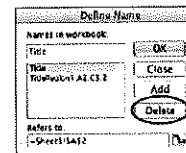
Note: *RowTitleRegion* or *ColumnTitleRegion* can be used for tables that only have row or column headers.

After entering the correct value in the *Name* field, select *Ok*. This table is now accessible. *Repeat this process* for every table on the sheet, remembering to select the *upper-left corner cell* of each new table.

Deleting formula names

You may occasionally create a formula name for the wrong field or give a single cell more than one name. These unnecessary formula names should be removed.

1. To remove formula names in *Windows*, select *Formulas > Name Manager*. In *Mac* select *Insert > Name > Define*.
2. Then choose the *desired name* and select *Delete*.





CREATING ACCESSIBLE MICROSOFT POWERPOINT 2016 PRESENTATIONS (WINDOWS)



Slide Layouts

Use slide layouts provided within PowerPoint to ensure files have *correctly structured headings and lists*, and *proper reading order*.

1. Select **Home > New Slide**, then choose a layout from the dropdown.



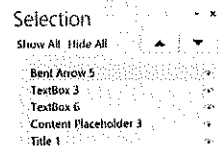
2. To change a slide layout, select **Home > Layout**, then choose a layout from the dropdown.



Slide Reading Order

If you *Insert* other content (e.g. a text box) it will be read by a screen reader in the order it is added to the page.

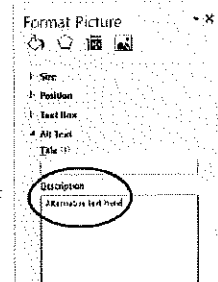
To check or fix reading order, select **Home > Arrange > Selection Pane**. Reading order is shown in reverse, *bottom to top*. Click and drag or use the arrow buttons to change reading order.



Alternative Text

Images should be given *appropriate alternative text* in PowerPoint. This alt text is read by a screen reader in a PowerPoint file and should remain intact when exporting to HTML or PDF.

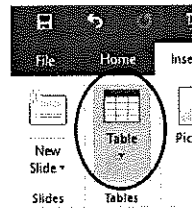
1. Right-click on the image and choose **Format Picture**.
2. Select the **Size & Properties** icon and choose **Alt Text**.
3. Enter appropriate alt text only in the **Description** field (not the **Title** field).



See webaim.org/techniques/alttext for more information.

Data Tables

Accessible tables need a *clear table structure* and *table headers* to help guide a screen reader user.

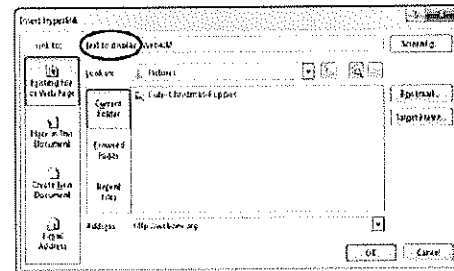


- Select the **Insert** tab on the ribbon, then select **Table > Insert Table**.
- **Keep tables simple**. There is no way to add table header information in a way that will be identified by a screen reader.
- If you have Adobe Acrobat Pro (not just the free Reader), *save your presentation to PDF* and add table headers in Acrobat Pro.

Hyperlinks

PowerPoint *automatically creates a hyperlink* when a user pastes a full URL onto a slide and presses **Enter** or **Space**. These may not make sense to screen reader users or others, so make the link text descriptive.

1. Select a hyperlink, right click, and select **Edit Hyperlink** or hit **Ctrl + k**.
2. Change the text in the **Text to Display** field to a more meaningful description.



Accessibility Checker

1. Select **File > Info**.
2. Select the **Check for Issues** button and choose **Check Accessibility**.
3. The **Accessibility Checker** task pane will show accessibility errors, warnings, and tips on how to repair the errors.

Select specific issues to see **Additional Information** at the bottom of the pane.



Other Principles

- Ensure *font size is sufficient*. If your presentation will be viewed on a projector, font size may need to be even larger.
- Provide *sufficient contrast*. If your presentation will be viewed on a projector, sometimes the contrast needs to be even more pronounced.
- Do not use color as *the only way* to convey meaning.
- Avoid *automatic slide transitions*.
- Use *simple slide transitions* when possible.
- Do not put accessibility information like alternative text in the **Notes** pane.
- If you have embedded video, ensure it is *captioned*.
- If you have embedded audio, *include a transcript*.
- If your slides contain animations, ensure they are *brief and do not distract* from the most important content on the page.
- Use *simple* language.

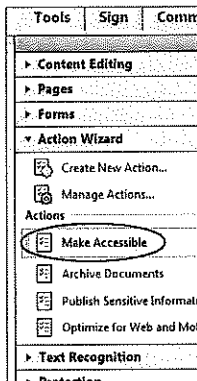


CREATING ACCESSIBLE PDF DOCUMENTS IN ADOBE ACROBAT XI



1. Run "Make Accessible" wizard

Select **Tools** from the upper right corner, then select **Action Wizard > Make Accessible** from the sidebar. Select **Start** button.



1. Add Document Description

– Enter a descriptive page **Title**. Other fields are optional.

2. Set Open Options

– Runs automatically

3. **Recognize Text using OCR** – If your PDF is not *true text*, it will be converted into true text during this step. If you are not sure if your PDF is true text, one easy test is to *search for a word* that you know occurs in the document. If no results are found, it needs to be *converted* to text.

4. **Detect Form Fields** – Only necessary if your page contains *fillable forms*.

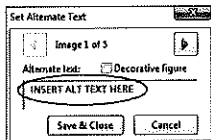
5. **Set Tab Order Property** – Runs automatically

6. **Set Reading Language**

7. **Add Tags to Document** – PDF "tags" provide accessibility information to *screen readers*. If your document *does not have tags* they will be added during this step. You will need to check the quality of these tags later on.

8. Set Alternate Text

A window will appear that allows you to *add alternative text*. Use the arrows to move between images and check *Decorative figure* if the image should be *ignored* by a screen reader.



9. **Run Accessibility Full Check** – This checker will show additional issues. Right click errors and warnings and select **Fix** to address the issues, **Skip Rule** if the issue has been addressed, and **Explain** to read online help.

2. Add/Change tags

The **TouchUp Reading Order** tool allows a user to quickly *add and edit PDF tags* and *view the reading order* of elements on the page. To edit tags, do the following.

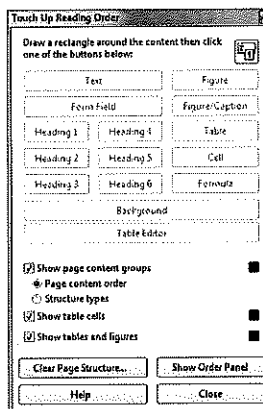
1. From the right-hand menu, select **Tools**.

2. Then select **Accessibility > TouchUp Reading Order**. If the **Accessibility** option is not listed, use the **Options** button to check **Accessibility** on the menu.

3. When selected, the view on the screen changes. All of the content is enclosed in numbered boxes. Each of these boxes represents a tag and the number corresponds with the reading order in the **Order panel**.

4. Select the **Structure Types** radio button. The page will now display tag types instead of reading order.

5. Within the **TouchUp Reading Order** window you will notice a group of buttons with the names of several common tags. You can use these buttons to assign tags to selected text or objects. Use the **Text** button for body text and the **Heading 1-6** buttons to assign correct heading levels.



You can also add/edit the following tags in the **TouchUp Reading Order** tool:

Images and alternative text

1. To tag a part of the page as an image, drag a box around the image and select the **Figure** button.
2. To add or change alternative text, **Right click** on the image, select **Edit Alternate Text**.
3. Enter the appropriate alternative text in the dialog box.

Table headers

1. Select a table and then select **Table Inspector**. Table header cells will be identified in red.
2. **Select a table or cell** by dragging a box through the cells (not around them or you might select additional cells). **Right click** on a selected cell(s) and choose **Table Cell Properties**. A dialog box will appear.
3. If the selected cell(s) needs to be tagged as a header, select the **Header Cell** option and assign a scope of either **Row** or **Column**.

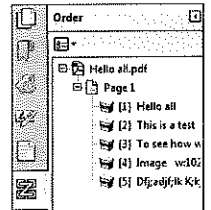
Move items to/from the background

1. Select an element you wish to move to the background (i.e., it will be ignored by a screen reader) and press the **background** button. This may include repetitive headers or footers.
2. If a part of the page is not in a gray box then it is already in the background. If it should be read by a screen reader, select the item and press the **appropriate button** (e.g., Text, Heading 1-6, Figure).

3. Check/edit reading order

The **TouchUp Reading order** tool can also allow you to *change the reading order of the page content* so it matches the visual reading order.

1. Select the **Page Content Order** radio button. Reading order will now be displayed in the page instead of tag type.
2. Select **Show Order Panel**. The Order Panel will appear in the left sidebar with numbers that correspond to the numbers in the page.



3. To change the reading order of an element in this panel, **click and drag** the tag to the location that reflects the correct reading order.

Note

It is easier/better to make documents accessible *as they are created*. See our other cheatsheets to make documents accessible in MS Word, PowerPoint, and InDesign.

**ADDITIONAL RESOURCES AND TIPS FOR MANAGING WEBSITE
ACCESSIBILITY COMPLAINTS**

June 23 – 26, 2019

YouTube, [Screen Reader Demonstration](#) (last accessed May 14, 2019).

[WebAIM - WAVE \(Web Accessibility Evaluation\) Tool](#) (last accessed May 14, 2019)

[The National Center on Accessible Educational Materials of the Center for Applied Science Technology](#) (last accessed May 14, 2019) (includes a virtual training center and [Cheat Sheets](#) on accessibility topics).

[PEAT – Partnership on Employment and Accessible Technology](#)

University of Colorado, [Web Accessibility Self-Study Resources](#) (last accessed May 14, 2019).

Georgia Tech, [Accessibility Resources](#) (last accessed May 14, 2019).

U.S. General Services Administration, [Section 508 Resources](#) (last accessed May 14, 2019).