

How to make accessible slides, posters, figures, and emails



What is this guide?

This guide outlines the simple actions you can take to make your PowerPoint slides, posters, figures, and emails accessible. It includes detailed instructions for how to build in accessibility as you draft.

This guide does not provide instructions for making Word or Excel documents accessible; however, some of the options discussed in this guide for PowerPoint can also be found in other Microsoft 365 applications (apps). For additional resources on accessibility, see <https://www.section508.gov/create/>.

What is accessibility?

In the context of this guide, accessibility means enabling understanding of your medical publications' content by people with vision, hearing, physical, or cognitive limitations.

Accessible materials make it possible for assistive devices to read digital content.

Accessible devices include screen readers, braille displays, and alternative keyboards, as well as eye-tracking devices, switch devices, and other tools.

When should you consider accessibility?

While we recommend a thorough check of the final draft, writers, editors, and reviewers should consider accessibility throughout content development.

The best practice is to make accessibility-informed choices from the beginning of drafting.

Who is responsible for ensuring accessibility?

Content teams should identify who will be responsible for ensuring accessibility.

For efficiency, we recommend that everyone hold responsibility for accessibility through the many choices made from drafting to finalization.

By making accessibility-informed choices from the beginning, you can avert the need to spend a lot of time making accessibility revisions after your content is finalized.

Key actions to make your content accessible

The actions below are organized by type of material, and the order in which you should use them when creating content. Click on each one to go to its instructions.

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Slides, posters, and figures

When you start

Choose easy-to-read font and make it big enough

What is easy-to-read font?

Easy-to-read font is clear and simple without decorative elements. “**Sans serif**” fonts—those without extra strokes at the ends of the letters’ main lines—are best. These include fonts such as Arial or Calibri.

Avoid decorative, serif, or script-style font, such as Times New Roman.

What size font is big enough?

In general, fonts should always be **at least 12pt**. However, this may vary depending on the format and how the final piece will be used:

- For body text in a publication, use at least size 12pt
- For posters, body text should be at least 24-32pt, poster headings should be 48pt or larger, with the title being even larger (72-100pt) to ensure visibility from a few feet away, including for viewers with moderate vision impairment
- For PowerPoint presentations:
 - 18pt for body text in video-conferencing platforms/webinars
 - 24pt for body text for in-person presentations

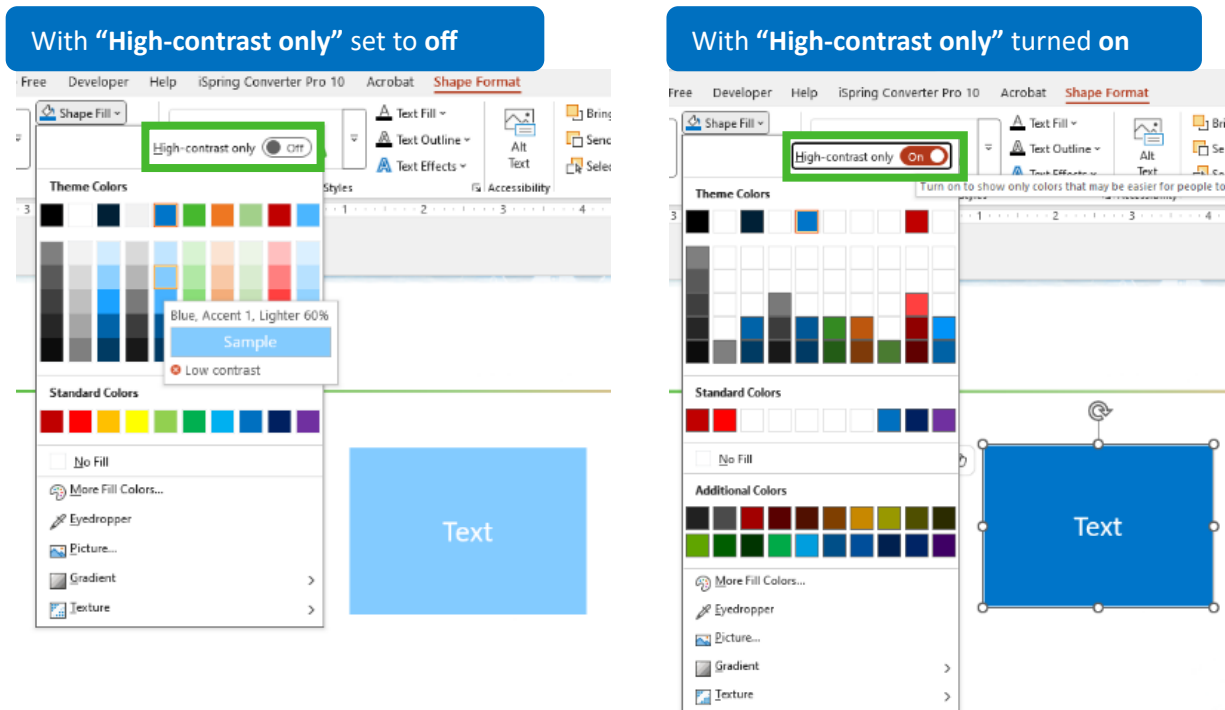
Consider contrast and color blindness

What is adequate color contrast?

Choosing colors with adequate **contrast** allows information to be **seen and understood** by readers with vision deficiencies, and when material is printed in grey scale. To ensure you choose colors with adequate contrast:

- Choose **dark text on light backgrounds** or **light text on dark backgrounds**
- When selecting colors from the Microsoft 365 color palette, you may turn on “**High-contrast only**” in the upper-right corner of the color dropdown menu to limit your choices to high-contrast options. The images below show the color dropdown menu with “**High-contrast only**” **set to off** on the left and **turned on** at the right. In the image on the left, all color options are available. In the one on the right, with “**High-contrast only**” selected, fewer

options are available. The “High-contrast only” filter is available for font, highlighter, and shape fill palettes



Tip: Always avoid blinking or flashing text or objects when making color and other design choices.

What tools can I use to check if the colors in my document have adequate contrast?

Color contrast checker

Use [Web Content Accessibility Guidelines \(WCAG\)](#) to ensure sufficient contrast between foreground and background elements. WCAG defines three levels of accessibility compliance—**A**, **AA**, and **AAA**, ranging from minimum to highest levels of conformance:

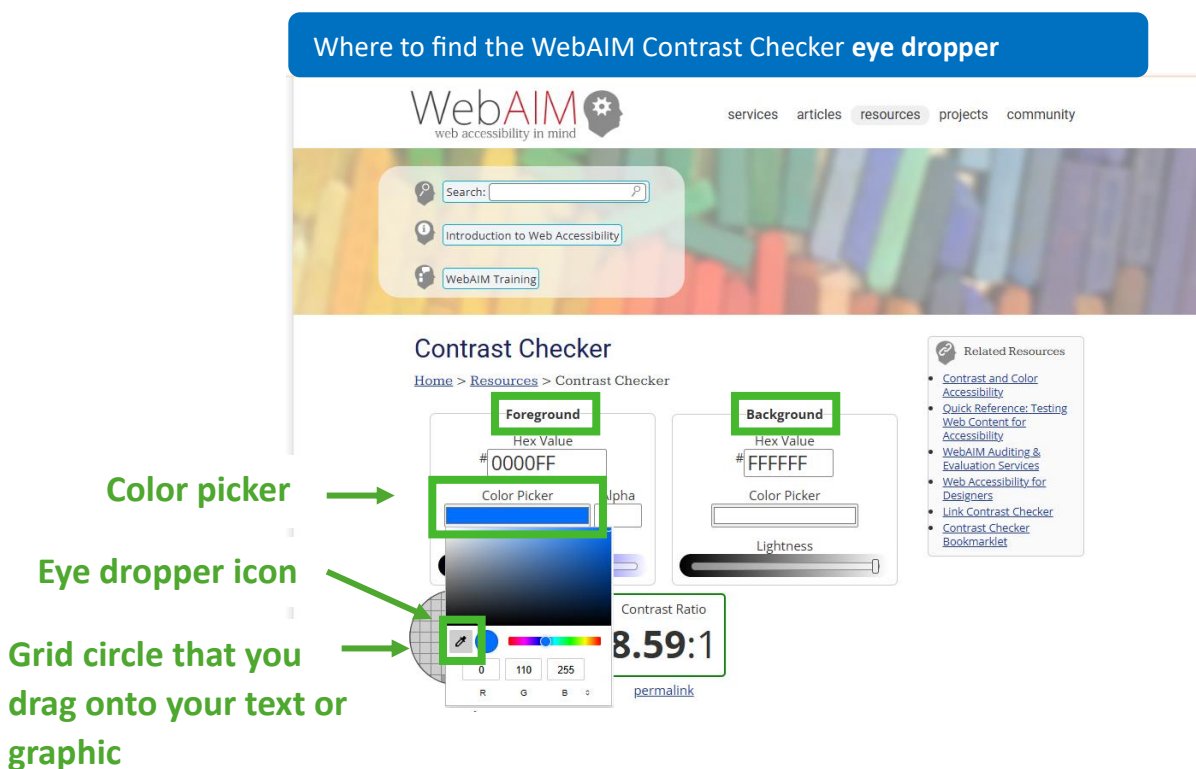
- **Level A**, the minimum level of accessibility; removes basic accessibility barriers
- **Level AA**, the recommended standard for most organizations; ensures content is usable by most people with disabilities;
- **Level AAA**, the highest and most strict level; includes enhanced features for maximum inclusivity;

WebAIM's Contrast Checker can verify compliance with WCAG standards. To use this tool:

Step 1: Go to the WebAIM contrast checker site to access the tool:

<https://webaim.org/resources/contrastchecker>.

Step 2: Select the band of color that is visible under the label **"Color Picker"** within **"Foreground"** on the left side of the screen grab shown below. Then, click on the **eye dropper icon** in the drop-down menu. This makes a **circle with small squares** inside it appear that you can **drag onto the text or graphic** in your document. Doing this populates the code associated with the color into the **"Hex Value"** (click down arrows next to the letter RGB in order to see the Hex #) field in the Contrast Checker. Repeat this using the **"Color Picker"** within **"Background"** on the right side of the screen to populate the **"Hex Value"** the tool will compare the first color against.



Step 3: The results the tool produces tell you whether the contrast ratio meets **Level AA** and **Level AAA** criteria based on the **size** of the **font** used and if it is **bold**. In the image below, both **normal-sized font**, which is **12pt**, and **large-size font**, which is at least **14pt and bold**, or **18pt and not bold** have a **"Pass"** rating next to them. This means they have adequate contrast. If certain color combinations **"Fail"** the Contrast Checker criteria, choose different colors and re-check them until the word **"Pass"** appears.

How to use the Contrast Checker results

Foreground

Hex Value
#6A85F0

Color Picker

Alpha
1

Lightness

Background

Hex Value
#000000

Color Picker

Lightness

Contrast Ratio

6.22:1

[permalink](#)

Normal Text

WCAG AA: **Pass**

WCAG AAA: **Fail**

The five boxing wizards jump quickly.

Large Text

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

Graphical Objects and User Interface Components

WCAG AA: **Pass**

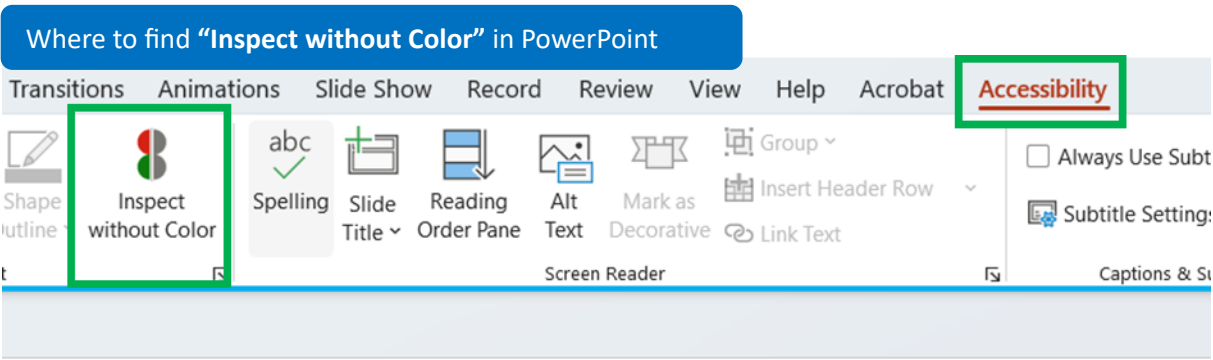
★

Text Input

When using companies’ brand or corporate guidelines, apply brand/corporate colors in alignment with WCAG contrast ratios. If brand/corporate colors don't conform to WCAG level AA, consider how the design of the piece can be developed to incorporate brand/corporate colors without making important content inaccessible.

PowerPoint’s “Inspect without Color” feature

PowerPoint allows you to view how your slide appears without color, so you can check if the intended meaning remains when color is removed. You can do this by going to the **Review** tab, clicking the **“Accessibility”** tab, and selecting **“Inspect without Color”**. This is shown in the image below. For more instructions on using the **“Accessibility”** tab, go to the section of this document called **“Use the accessibility checker”**.



How can I address color vision deficiency?

Color vision deficiency, also called color blindness, is common. Red/green color blindness is the most common type; people affected may struggle to distinguish between red and green or between any secondary or mixed colors containing red or green. For example, blue and purple may appear similar because the 'red' part of purple is not visible.

- Avoid the following color combinations: Red/green, blue/yellow, green/brown, and light pastels against a white background

As well as carefully choosing color combinations, other important considerations to address color vision deficiency are:

- Avoid using only color to convey meaning; **describe the meaning in text**
- Pair colors with shapes, icons, or patterns to enhance understanding

Tip: Blue/orange combinations provide a high contrast that is visible to almost all viewers.

Can I check what my content looks like to people with color vision deficiency?

You can simulate how figures appear to people with color vision deficiency, using tools like [Coblis](https://www.color-blindness.com/coblis-color-blindness-simulator/) (<https://www.color-blindness.com/coblis-color-blindness-simulator/>).

Use a logical reading order

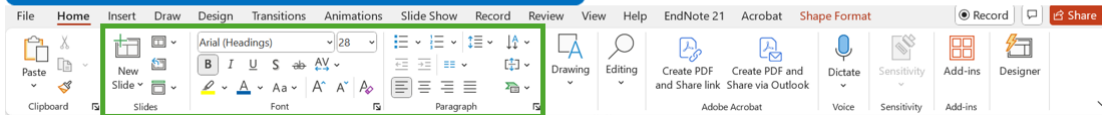
What is a logical reading order?

A logical reading order means that when content is read out loud, it is **read in an order that makes sense to the listener**. Ensuring a logical reading order allows assistive devices to **sequence the content** they convey in a manner that is clear. It informs devices that a slide or figure title should be read first, then a subtitle, then the main content, etc., and prevents less important information, such as footers and logos, from being read first. Slides, posters, and figures need to be set up to make this easy and logical for assistive devices.

Best practices to follow for a logical reading order from the beginning of drafting in Word and PowerPoint are to:

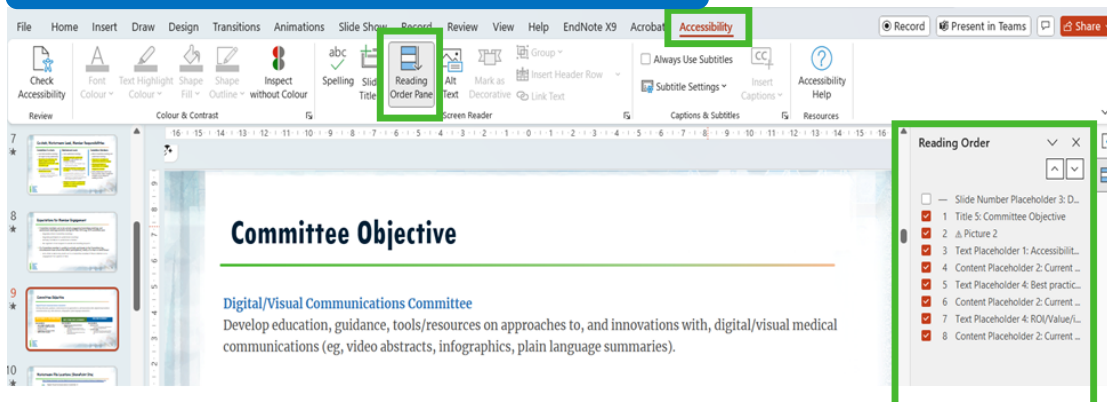
- Use a **consistent layout** across all slides and figures and a **predictable pattern of text** across posters
- Use PowerPoint's built-in settings such as **standard slide layouts**, **bulleted and numbered lists**, designated **title text**, and column layout for columns. These options are within the green rectangle in the below image

Where to find PowerPoint's standard layout settings



As you review your content, you can also use the **“Navigation Pane”** in the **View** tab to order titles, headings and subheadings in Word, and the **“Reading Order”** pane in PowerPoint. To do this in PowerPoint, find the **“Reading Order”** pane in the **“Accessibility”** tab. You can **review the order of content** and re-order to align with how you intend the content to be read. To re-order content on your slide, simply drag the item in the **“Reading Order”** pane at the far right to its new order. The reading order will be numerical from 1 onwards. **Uncheck** items you **do not** want an assistive device to read, such as decorative items.

Where to find PowerPoint's “Reading Order Pane”



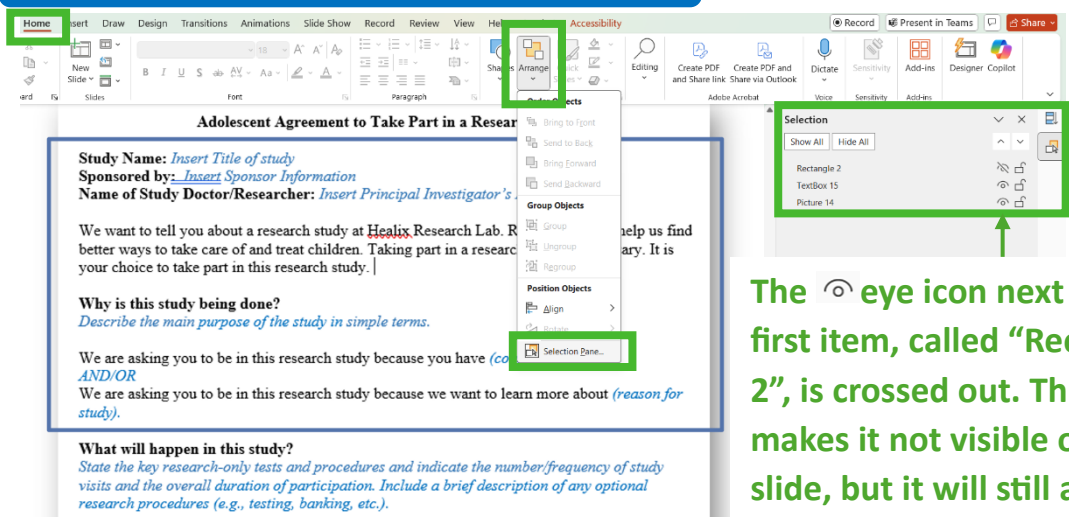
Tip: Complete this **“Reading Order”** pane review as you develop your slide deck so that it does not need to be repeated as content changes through development. To get used to this process, try leaving your **“Reading Order”** pane open as the slide is being created.

Can I have hidden content on a slide that assistive devices can read to improve flow?

Yes. To include content on a slide that is read by assistive devices, but is not visible on the slide, you can hide it using the **“Selection Pane”**. The **“Selection Pane”** is an option at the bottom of the **“Arrange”** menu within the **Home** tab, as pictured in the image below. Note: if you do not see the **“Selection Pane”** in the drop down, key in the words ‘selection pane’ in the search. Within the **“Selection Pane”**, you can **select** the **eye icon** to the right of each item to

hide an item visually but still allow it to be read by assistive devices, as shown in the below image:

Where to find PowerPoint's "Selection Pane"



The eye icon next to the first item, called "Rectangle 2", is crossed out. This makes it not visible on the slide, but it will still appear in the "Reading Order" pane for assistive devices

Manage complex tables and figures

All tables and figures should be compatible with assistive devices, even if they are complex.

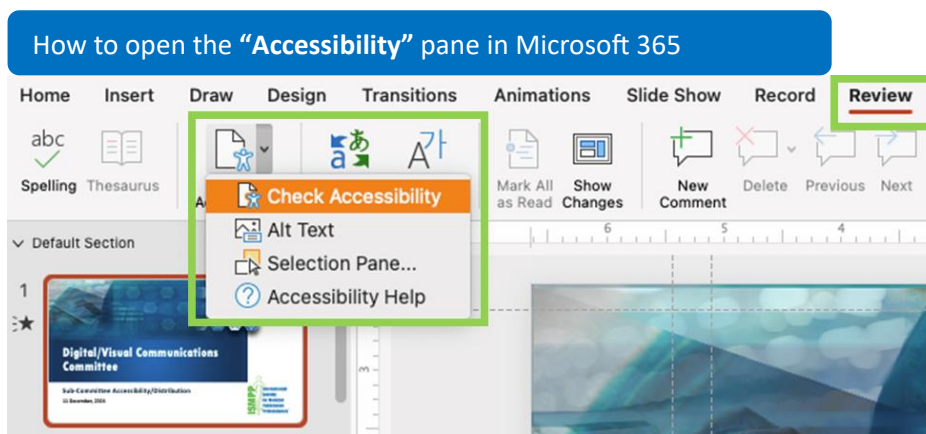
- As a best practice, always aim to **build tables** and **figures in PowerPoint** in the **simplest form possible** and avoid anything overly complex. Assistive devices cannot navigate nested tables or tables that have merged or split cells
- Do not paste complex tables from Excel into PowerPoint or Word
- For complex tables, charts, and figures, describe data trends, axis labels, and key takeaways. Consider **making complex figures** in a **tagged PDF** and then pasting into slides. Note: Tagged PDF is a type of PDF document that includes special codes or 'tags'. A tagged PDF has instructions that allow assistive devices to read content following a logical order so that it is understandable

As you go

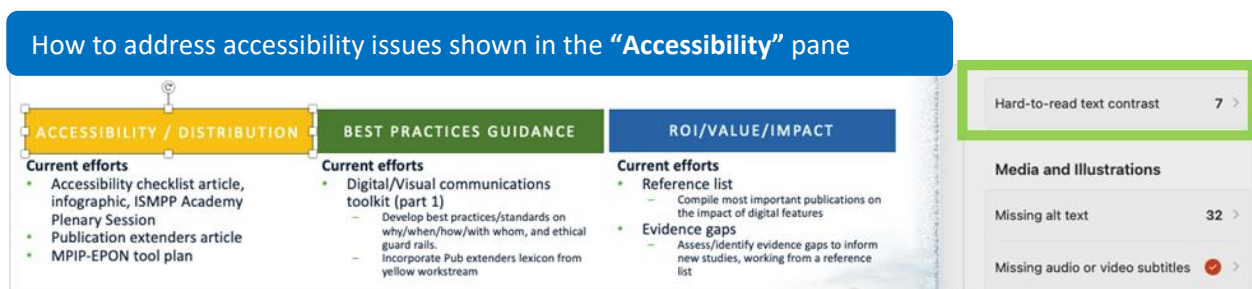
Use the accessibility checker

You can use the **built-in accessibility checker** in Microsoft 365 to identify and fix issues during content development. To do this:

Step 1: Select the **Review** tab and select  “**Check Accessibility**” to open the “**Accessibility**” pane on the right.



Step 2: In the “**Accessibility**” pane, you'll see a list of errors and warnings at the far right, with how-to-fix recommendations for each. In the example below, **hard-to-read text contrast** is flagged.



Tip: Select the element listed at the far right (i.e., “Hard-to-read text contrast”) to view the exact location in your slide deck of the items that are hard to read.

Step 3: To quickly correct the issue, click on issue and **review recommendations**. In the example below, options are provided to **change text color** (i.e., “Try one of these to fix it”). Pick desired color from recommendation list or color menu. Click **Save**.

How to correct accessibility issues by reviewing and selecting solutions

Committee Objective

Digital/Visual Communications Committee

Develop education, guidance, tools/resources on approaches to, and innovations with, digital/visual medical communications (eg, video abstracts, infographics, plain language summaries).

ACCESSIBILITY / DISTRIBUTION	BEST PRACTICES GUIDANCE	ROI/VALUE/IMPACT
Current efforts - Accessibility checklist article, infographic, ISMPP Academy Plenary Session - Publication extenders article - MPIP-EPON tool plan	Current efforts - Digital/Visual communications toolkit (part 1) - Develop best practices/standards on why/when/how/with whom, and ethical guard rails. - Incorporate Pub extenders lexicon from yellow workflow	Current efforts - Reference list - Compile most important publications on the impact of digital features - Evidence gaps - Assess/identify evidence gaps to inform new studies, working from a reference list

Hard-to-read text contrast

Current text color is hard to see. Consider a high contrast color so that the text is clearly visible.

Try one of these to fix it:

Change text color

Step 4: Go through and resolve each issue under “**Accessibility Assistant**” until all accessibility issues have circles with checkmarks ✓.

Checkmarks show that all accessibility issues have been resolved

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Color and Contrast

- Hard-to-read text contrast ✓ >
- Avoid red formatting ✓ >

Media and Illustrations

- Missing alt text ✓ >

Tables

- Reference list ✓ >
- Missing table header ✓ >
- Use of merged cells ✓ >

Document Structure

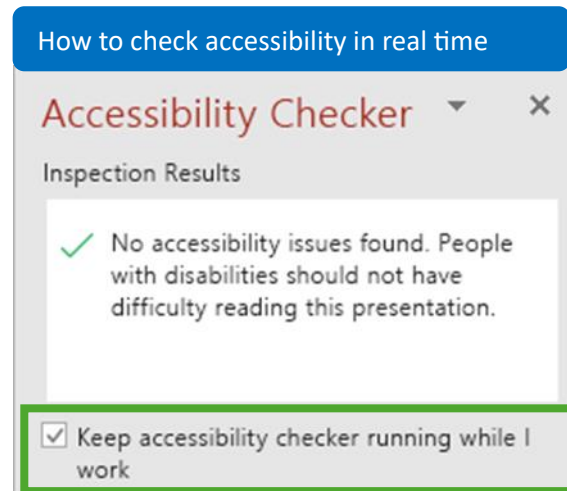
- Default sheet name ✓ >

Tip: For more information on how the findings are categorized, click on this hyperlink to learn more: [Rules for the Accessibility Checker](#).

Can I check accessibility in real time as I am drafting?

Another tip is to turn on **real-time accessibility alerts** in your Microsoft 365 apps. This will provide real-time accessibility notifications as you work, helping you to easily embed accessibility into your workflow.

Keep
accessibility
checker on as
I work →



How can I check accessibility in a PDF?

To evaluate a PDF's accessibility, start with built-in tools like **Adobe Acrobat Pro DC's Accessibility Checker**, which scans for compliance with WCAG standards. To do this:

- From the **Tools** tab, click on **"Accessibility"** and select **"Full Check"** from the menu.
- The **Accessibility Checker** task pane will appear on the right displaying issues.
- Click on an issue to see details and follow the recommendations provided to resolve it.

For more comprehensive analysis of a PDF, specialized tools like PDF Accessibility Checker (PAC; <https://pac.pdf-accessibility.org/en>) or axesPDF (www.axes4.com/en/software-services/axespdf) offer in-depth evaluation against PDF/UA standards.

Applications such as InDesign and Illustrator, which are used to develop PDFs, can perform some basic accessibility checks, but they are primarily a tool for creating an accessible PDF. For example, defining and mapping paragraphs to ensure assistive devices can interpret the structure correctly.

Can I use artificial intelligence tools to check for accessibility?

Artificial intelligence (AI) tools may also be helpful in checking for and addressing accessibility. Consider using AI tools, such as Microsoft 365 Copilot and ChatGPT, to check for accessibility. Make sure to check corporate policies and ensure you have secure access before putting confidential information into an AI tool.

Tip: Contact the **Microsoft Disability Answer Desk** for technical assistance. Its team is trained in using assistive technologies and can offer assistance in multiple languages.

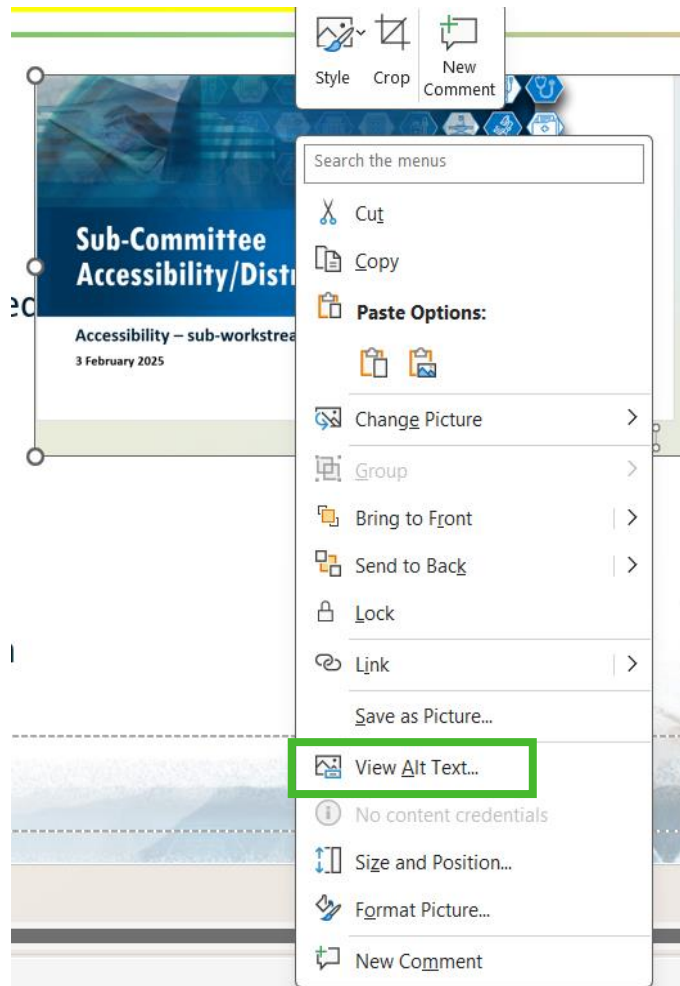
Embed alt text

What is alt text?

Alt text (or alternative text) is the text that assistive devices read out loud to describe images or other graphics on a screen to people with visual impairments. You should add alt text to all figures and other graphics that convey meaning.

- To add alt text, **select** the image, **right click “View Alt text”** on the right-click options menu or in the **“Accessibility”** tab, and add descriptive text in the box that appears. When creating alt text, it is important to remember that meaningful alt text describes a figure's content and purpose, not just its appearance

How to add alt text to a figure or graphic



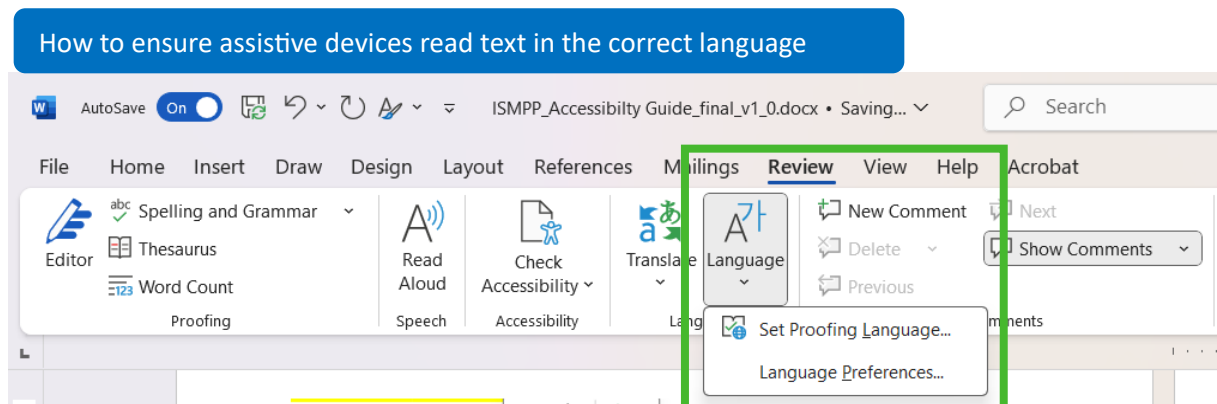
Tip: Microsoft 365 apps like Word and PowerPoint can automatically generate alt text for inserted images and figures, but this is frequently basic or inaccurate. Manual review and editing are recommended to ensure clarity and relevance.

Make links readable

When including a link, either use a link that clearly describes the destination, function, or purpose (e.g., www.accessibilityfaq.com) or embed a hyperlink on similarly descriptive text (e.g., [Accessibility Frequently Asked Questions](#)).

Select appropriate language

Text written in a language other than the predominant language in a slide or figure should be designated as that language in order to be read correctly by assistive devices. Do this by selecting **“Set Proofing Language”** in the language dropdown menu in the **Review** tab.





When you finalize

Save file with a descriptive title and in an appropriate document format

To enable recognition by assistive devices:

- Use a descriptive file name with underscores or dashes (such as: “Introductory_slides_for_session_1” instead of “Presentation_1,” or “Poster-number-22_for_session-1,” instead of Poster 22).
- Save PowerPoints as .pptx files.
- Save PDFs and figures in high-resolution formats to preserve clarity when images are magnified.

Add transcripts, captions, and audio for multimedia

- Multimedia files should include a full-text transcript for audio, an accurate and complete description of visuals, and synchronized captions with audio descriptions for multimedia
- For figures embedded in videos or interactive content, include captions, transcripts, and audio descriptions where applicable
- Presentations viewed on a screen should leave the bottom quarter of each slide blank for captions or transcription

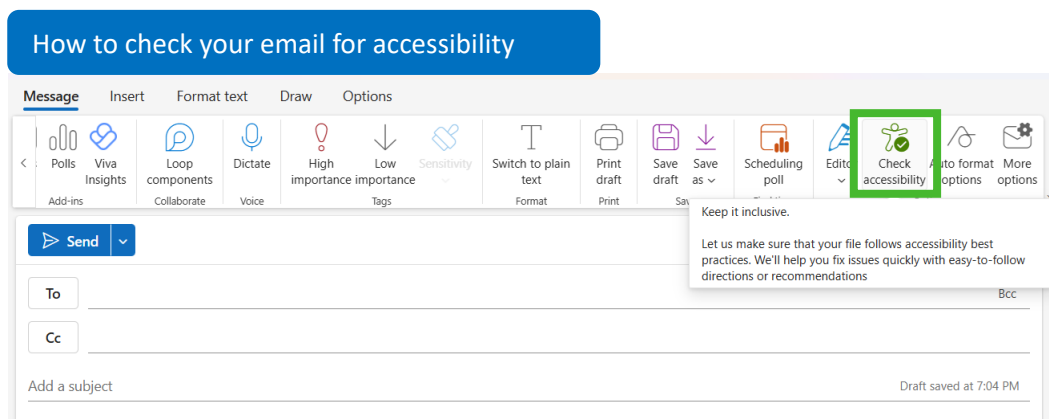
Tip: Be sure to budget for these steps and include them in workflow timelines when developing multimedia projects.

Special considerations for emails

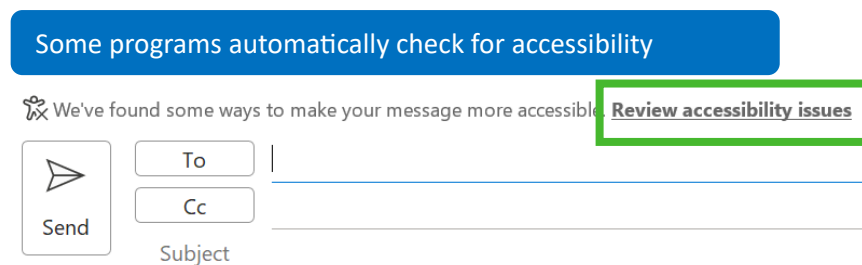
To ensure accessible emails, follow these steps:

Check and fix accessibility issues

As you draft your email, find **“Check Accessibility”** from one of the tabs. Where **“Check Accessibility”** is and how to find it will differ across email apps, however, most apps have it. It may appear in the **Messages** tab, the **Review** tab, the **Options** tab, or another tab, depending on your device. Follow the prompts, which are similar to the steps described earlier in **“Use the accessibility checker”**.

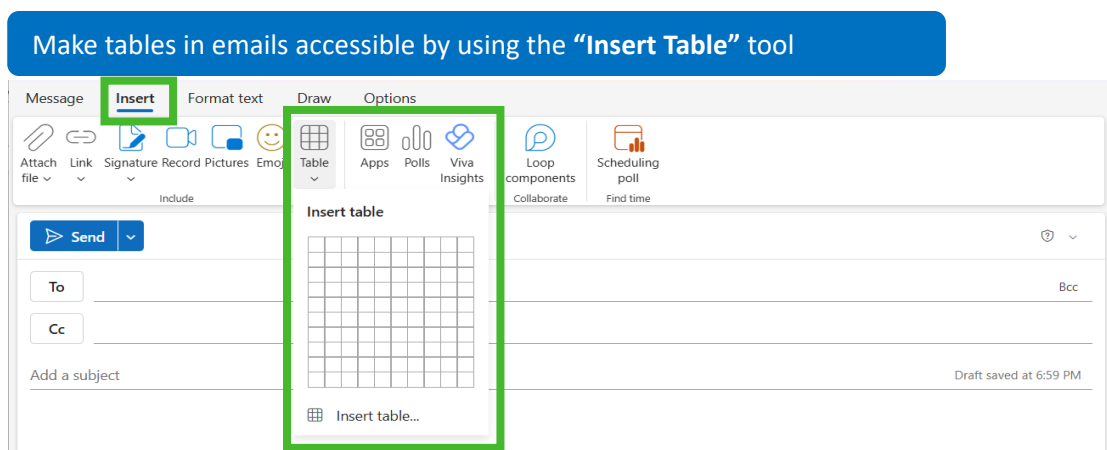


In some apps, you may notice a statement above the **“To”** and **“Send”** buttons that indicates that your email app automatically checked for and found accessibility issues, as pictured:



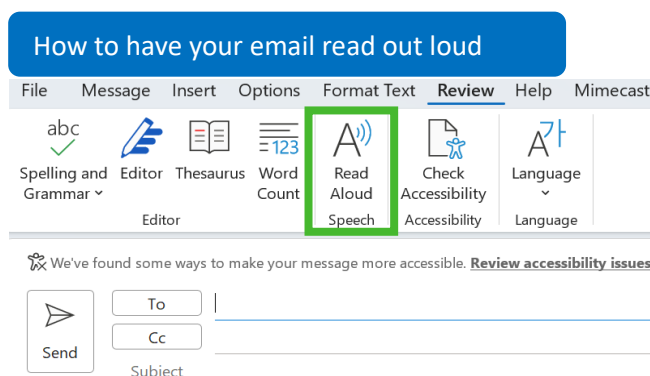
Instead of pasting images, build tables directly in your email

Tables pasted into emails as images, such as screenshots, are not accessible and require alt text and formal captions to achieve accessibility. Instead of copying and pasting tables as images, use the **“Insert Table”** formatting tool and type or paste text into the table. Headers and table content should be text capable of being read by assistive devices.



Select “Read Aloud” to ensure your email is understandable

When you have finished drafting your email, you can select the option to have it read out loud. This is best practice to help ensure the context of your message is understandable and all elements are accessible to the recipient. It also allows you to ensure you are satisfied with your email’s overall tone and content. The below image shows what the **“Read Aloud”**  option looks like, though it may look different on your screen:



Tips:

1. If your email is compliant with all elements of accessibility, no tips will be shared.
2. When using the accessibility checker, consider clicking on the **“Learn About Accessibility”** help button. This provides background understanding of why many of the elements discussed here are important for making emails more accessible.
3. Avoid using text in images as the sole method of conveying information. If you must use an image, repeat that information in the email.
4. It’s a good practice to use the **“Read Aloud”** tool before sending an email.

Additional Links

Web accessibility evaluation

<https://www.w3.org/WAI/test-evaluate/tools/list/>

Color contrast checker

<https://webaim.org/resources/contrastchecker/>

General guidance for digital products

<https://www.section508.gov/create/>

<https://support.microsoft.com/en-us/office/accessibility-tools-for-microsoft-365-b5087b20-1387-4686-a0a5-8e11c5f46cdf>

<https://webaim.org/articles/>

Acknowledgments

This guide was developed by members of the ISMPP Digital/Visual Communications Committee, 2024/2025.