

Top Items to Improve Excel Accessibility

**Note: Contains some content from ATI's Document Accessibility Fundamentals Course.*

Getting Started

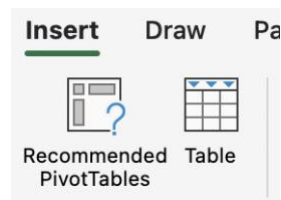
1. Select an [accessible template](#) by choosing **File>New from Template**. In the window that opens, enter "**accessible template**" in the search field, and choose a template that matches the type of content intended for the spreadsheet.
2. Enter descriptive names for each worksheet in your workbook, leaving no blank worksheets.
3. Be sure to fill in information for the A1 cell.
4. Make sure to organize data in a logical reading order, left to right, then top to bottom. Avoid spanning information across multiple rows or columns.
5. Verify vital information in headers, footers, and watermarks is duplicated in another part of the document.
6. Avoid using form fields.

Tables

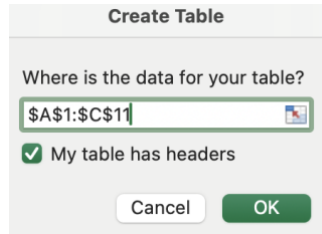
If you plan to add a [table to your spreadsheet](#), it is important to keep the table as simple as possible, avoiding split or merged cells, as well as nested tables. Screen reader software reads tables from left to right, cell by cell, top to bottom. Concise, straightforward header cell information is critical for screen readers to [navigate the table](#) successfully.

To add a table:

1. Enter data to be used for the table.
2. Click in a cell within the data.
3. Click on **Insert** menu and click on the **Table** button.



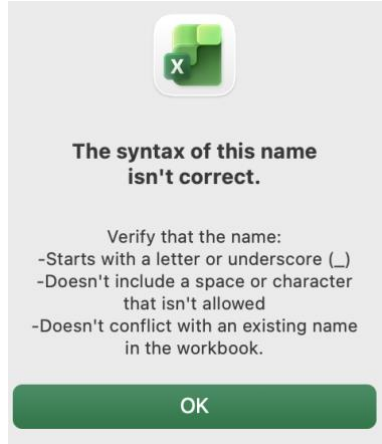
4. Verify the selected area includes all the data for the table.
5. Ensure **"My Table has headers"** is checked, and click **OK**.



6. Add a descriptive name for the table by clicking any cell within the table, choose the Table menu, and fill in the table name in the field under **"Table Name."**



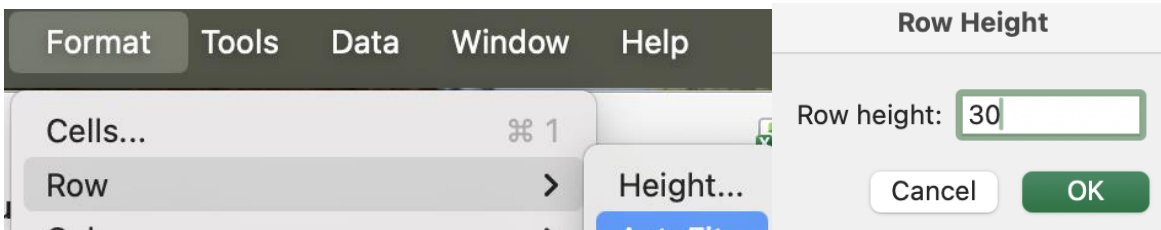
***Please note:** The table name must start with a letter or underscore, not include spaces or unallowed characters, and not conflict with the name of an existing table in the workbook.



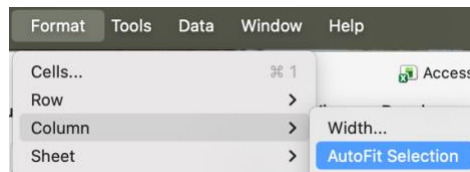
7. Choose an accessible table design by selecting a cell within the table, and click on the Table menu. Make sure to choose a design with greater color contrast of rows, as well as the header row.



8. Increase row height by selecting the entire table, selecting **Format**, navigating to **Row>Height**, increase the row height to, 30 or 40 for example, and click **OK**.



9. Adjust column width by selecting the entire table, going to **Format>Column>AutoFit Selection**.



10. Select a cell in the table, click on the **Table** menu, and verify the **Header Row** and/or **First Column** are checked.



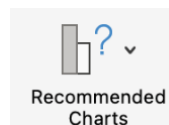
Charts

When including a [chart](#) in your spreadsheet, it is important to choose labels for chart elements carefully, as well as include alt text, to help people using a screen reader to understand the data.

1. Create the chart by selecting the data for the chart, select **Insert**, and choose the chart you would like to use.



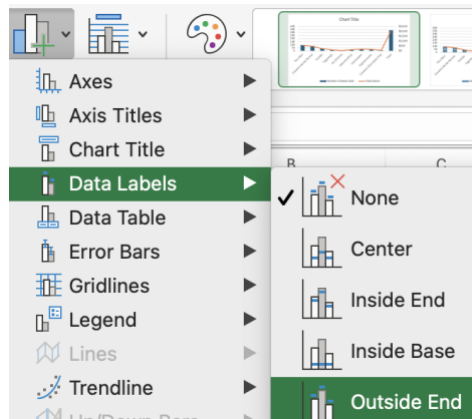
2. If you are not sure what would work best, try the "**Recommended Charts**" option.



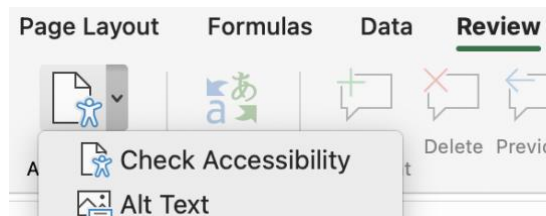
3. Select **“Chart Title”** text, and revise it to a meaningful title.
4. Select **Chart Design>Add Chart Element>Axis Titles** and choose either Primary Horizontal or Primary Vertical. In the chart, select the **“Axis Title”** and enter a title that clearly describes the axis. If both axes are used, follow the same steps to label the other axis.



5. Select **Chart Design>Add Chart Element>Data Labels>Outside End**.



6. Select the horizontal or vertical axis, then **Format>Format Pane** to adjust the legibility of the axis, including the axis type, axis crosses, position, tick marks, label position and interval, and number format.
7. Check the font format to make sure the font is a light color on a dark background, or vice versa. Verify the font is a sans serif font, such as Verdana, and it is at least 12 points or larger.
8. Add alt text to describe the chart by selecting **Review>Check Accessibility>Alt Text**, and click on the chart to access the alt text field. Alternatively, you can select the chart, right click on it, and choose **“View Alt Text...”**



Fonts

The [recommended fonts](#) to use for accessibility are Arial and Verdana. The best font size to use is 12 pt., anything smaller should not be used.

Note: Avoid the following to communicate meaning or emphasis, as screen readers will ignore the formatting.

- Capitalization
- Bold, italics, underlining
- Strikethrough
- Highlighting
- Drop caps
- WordArt

Color Choices

Make sure to choose colors that have a greater [contrast ratio](#), so those with visual impairments will be able to read the document. When there is less color contrast between the font color and the background color, it is more difficult for those with visual impairments to read. The below illustration gives various examples of color contrast, pay close attention to the examples with a contrast ratio of at least [4.5:1](#).

Examples of Contrast Ratios

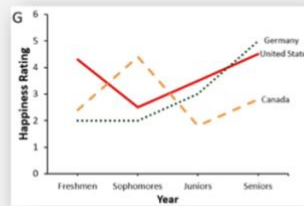
- Blue 12 pt text on white background with ratio of **3.2 to 1**
- Green 12 pt text on white background with ratio of **2.3 to 1**
- Red 12 pt text on white background with ratio of **4.3 to 1**
- Dark red 12 pt text on white background with ratio of **5.7 to 1**
- Yellow 12 pt text on white background with ratio of **1.7 to 1**
- Black 12 pt text on white background with ratio of **21.0 to 1**
- Blue 12 pt text on black background with ratio of **6.7 to 1**
- Green 12 pt text on black background with ratio of **9.0 to 1**
- Red 12 pt text on black background with ratio of **4.9 to 1**
- Dark red 12 pt text on black background with ratio of **3.7 to 1**
- Yellow 12 pt text on black background with ratio of **12.6 to 1**
- White 12 pt text on black background with ratio of **18.3 to 1**

From ATI Document Accessibility Fundamentals Course

When including illustrations, such as a chart, make sure not to rely on color alone to communicate meaning. Use another indicator as well, such as shape or line type, to communicate information.

Example of an accessible chart

Using the same chart, now color, line type (i.e., dashed, solid), and labels are used to distinguish between each country.

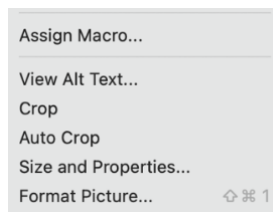


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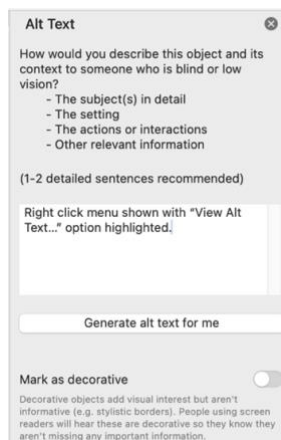
Images

When including images in your spreadsheet, also give your images a description, called [alt text](#), that can be read by a screen reader, to give information about the image. When possible, avoid images with text, as the text is unavailable to the screen reader software, and cannot be adjusted easily by those who may need to alter text elements, such as font size. Also avoid distracting background images. To enter the alt text information:

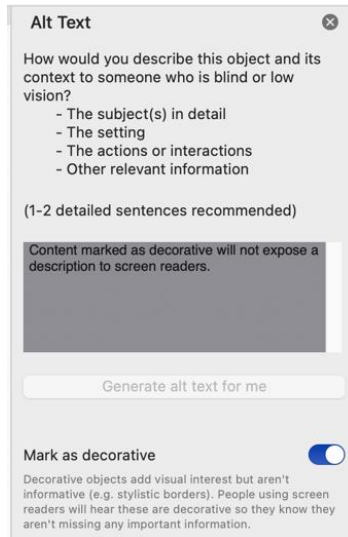
1. Right click on the image.
2. Choose **View Alt Text** from the menu.



3. In the window that appears, enter a [1-2 sentence description](#) of your image.



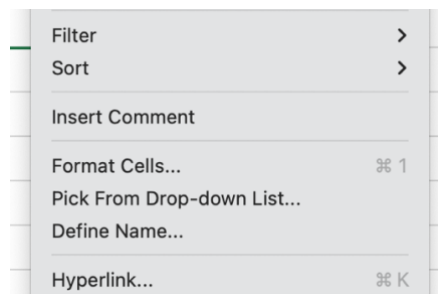
4. If it is decorative, meaning it does not give information, such as a border or line, choose **Mark as decorative**.



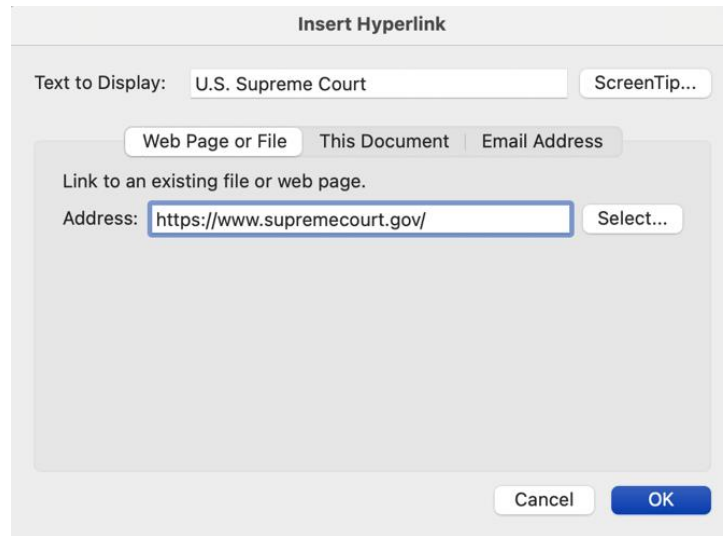
Links

When adding [hyperlinks](#) to your spreadsheet, it is important to give each link a [unique name](#) that identifies how and where a link will open. Screen reader software provides a list of links, and if each has the same name, or is not descriptive, the person using screen reader software will not know which link to choose, or where the link will take them. Make sure to avoid link names such as "Read More," "Click Here," "Here," or "Learn More." To give your link a unique, descriptive name:

1. Type the word you want to associate with the hyperlink, and then click away from the cell.
2. Right click the cell, and choose **Hyperlink**.

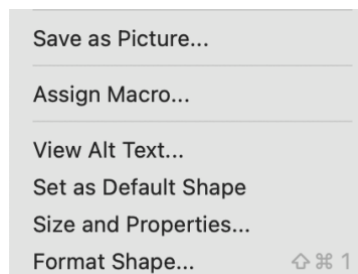


3. Enter the link in the **Address** field, and verify a unique, descriptive name is in the **Text to Display** field.




4. When finished, click **OK**.

***Please note:** If you would like to insert more than one link into a cell, you will need to implement [this workaround](#), and mark the shapes as decorative once complete. To do that, follow the same steps as you would to add alt text to an image.



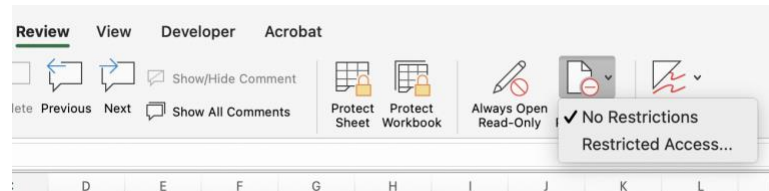
Document Information

There are three pieces of information that are helpful for screen readers to find information in the document: Title, Author, and Language. To enter the Title and Author, go to **File>Properties>Summary**. When done, click **OK**. To enter the document language, go to **Tools>Language**. Click on the **Language** option, make sure English is set as the default, and click **OK**. When done, save your document in the **.xlsx** file format to retain accessibility information, and give the document a filename that indicates the file's content.

File Format: Excel Workbook (.xlsx) 

Document Protection

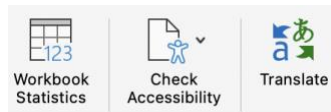
There should be no protections enabled, so no areas of the spreadsheet are rendered inaccessible. To check for protections, click on the **Review** menu, and select the caret symbol next to Restrict Permissions to verify “No Restrictions” is checked.



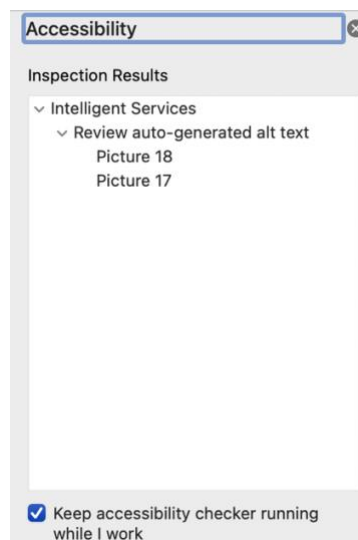
Checking for accessibility

The next step is to check for [accessibility](#) issues. To check accessibility:

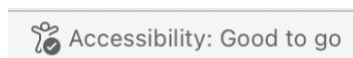
1. Click on **Review>Check Accessibility**.



2. An Accessibility window will open with items to check and correct.



3. After correcting any accessibility issues found, you can close the window. Alternatively, you can click on the Accessibility status display at the bottom of your document to open the Accessibility window.



Create PDF

The last step is to create a PDF version of your Word document, to allow people without Word to view your document. To create the PDF:

1. Go to **File>Save As**.
2. In the **Save As** field, give your document a name, if the document name will be different from your Excel document name.
3. Choose a location to save your PDF document to.
4. Choose PDF from the **File Format** dropdown list, and make sure **Best for electronic distribution and accessibility (uses Microsoft online service)** is selected.
5. Click **Export**.

