

Excel

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To make an Excel spreadsheet accessible, we want to do many things that are good practice anyway, and some specific things for visually impaired users, such as those using assistive technology screen readers.

Contrast

Follow contrast guidelines covered in Word Colors and Contrast.

The easiest way to do this is just leave the whole workbook in black and white. If you do use color, refer to the Word Colors and Contrast for ways to check that there is adequate contrast for all types of readers.

Worksheet Names and Table Titles

Provide descriptive titles in the worksheet name tab and for each table.

To change the name of a worksheet, double-click on the tab name and type in a new name. Worksheet names can only have 31 characters. There are also some characters it will not accept, including backslash and brackets.

Give your table a descriptive name that explains what information it contains. For example, instead of the title, "Project Plan," use a title that will tell the reader five years from now what the table is about, such as, "Office 2010 Accessibility Training Module Timeline, Summer 2012." It's fine if the title takes more than one row.

Table titles should be placed in the first column so screen readers can find them easily

Row and Column Headers

Each table should have row and column headers for every column and every row in a way that makes sense. Don't leave any headers blank, even if the meaning seems obvious to you.

The diagram illustrates two table structures. The top table has a blank header cell in the first column, which is highlighted with a red box and labeled "No blank column headers". The bottom table has a "Tasks" header in the first column, also highlighted with a red box. Both tables have two columns: "Tasks" and "Completion Date".

	Completion Date
Find talent/volunteers	May 9
Assign roles	May 14

Tasks	Completion Date
Find talent/volunteers	May 9
Assign roles	May 14

No Blank Data Cells

Cells should not be left blank either. If the cell really has no data, then you can put in: "This cell intentionally left blank" or "No data." This could be in normal text.

Hyperlinks

Ensure that all hyperlinks work and also show a working URL.

To access the Hyperlink dialog box, Right-Click on the cell and choose Hyperlink (if there isn't a hyperlink yet) or Edit Hyperlink (if there is already a hyperlink in that cell).

Avoid hyperlinks that say 'click here.' Your link should include the web address itself. Think about someone printing out your table. Will they be able to access the link? Go ahead and include everything, including http://.

Add a ScreenTip. ScreenTips provide additional information about the link, and are readable by screen readers.

Here's how to add a ScreenTip:

- Right-click on the cell where your URL is located, and choose Edit Hyperlink.
- In the Hyperlinks dialog box, choose the ScreenTip button at the top right. In the new box, type in a meaningful explanation of where the link will take the reader.
- Click OK twice to close both dialog boxes.

Charts

Ensure that any charts have alternative text descriptions. This is different than images, since charts created in Excel don't have an area for Alt Text.

- Resize the row where you want to insert the chart. You may merge cells if you want.
- Insert the chart.
- In the cell where the chart is, type the description. This description may need to be fairly long to adequately explain the chart.
- Hide the text of the description by changing the text color to match the background.
- Now when a screen reader comes across the cell containing this chart, it will read the text description.

Avoid Blank Rows and Columns

Avoid blank rows and columns within a table.

- Resize your rows and columns to give the spacing that helps make the table readable rather than using blanks to create your spacing.
- One really common mistake is leaving column A blank (because it makes it look like a margin).
- Also, if you have two or more tables on the same worksheet, leave a single blank row between each table. You can resize the blank row to create a space that is visually appealing.

Images

Ensure that any images have alternate text descriptions

- Insert the image, then right-click and choose Size and Properties.
- In the Size and Properties dialog box, choose the Alt Text tab. Type in a brief description with enough detail to explain the pictures. You don't need to say "image of" or "picture of" because the screen reader alerts the reader that it is an image.
- Click Close.

End of Worksheet

Type End of Worksheet in the row immediately after the last row of your table.

Defining the Title Region – a Very Important Step

One final, advanced step is "defining the Title Region" which is a little bit of code so the screen reader knows to repeat the row and column titles when reading the data.

How a screen reader reads a table: the default for a screen reader in English is to read starting at the top, and going left to right. When it gets to the end of a line, it goes to the next line down and reads, again, from left to right.

Now imagine a screen reader reading this table [example defining title region.xlsx]. Without some help from you, the screen reader reads it like a book. After the title, it will read, "Type, January, February, March, April, etc. Then it will go to the next line and read Sci Fi 4, 3, 3, 2, 5, 6, and so on. As sighted readers, we are constantly referring back to the row and column headers to see what the numbers refer to. Visually impaired users need those references too.

What we need is for the screen reader to read this way:

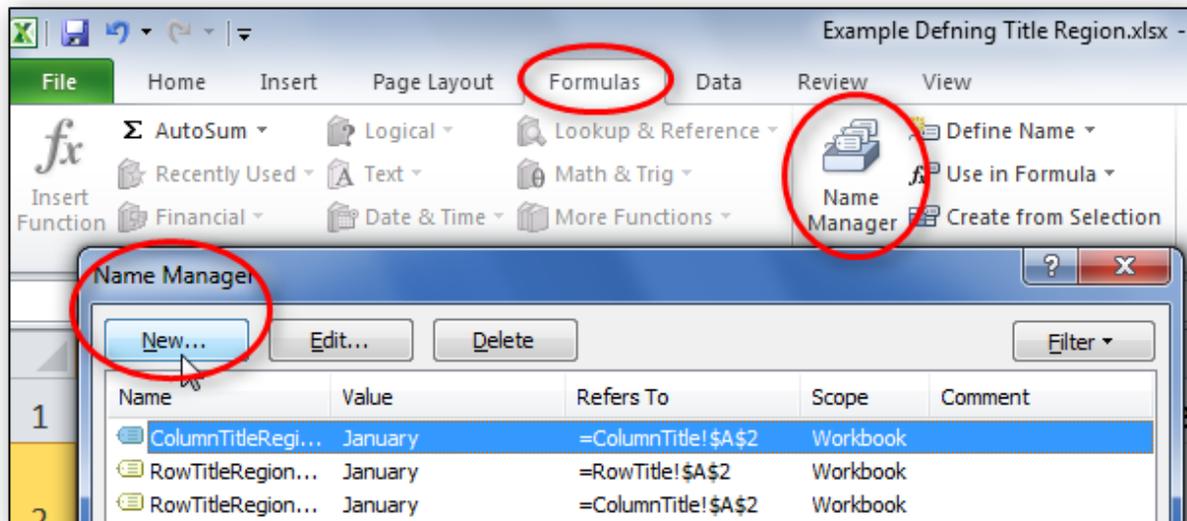
- Sci Fi: January, 4;
- February, 3;
- March, 3;
- And so on.

In other words, the screen reader should repeat the column header each time before it reads the value. Screen readers are smart enough to do that! We just have to tell them how our table is set up and how to read it.

Here's how to do it:

1. Before we begin, we need to know three things about our table:
 - Is this the first (or only) table on this worksheet?
 - What are the addresses of the top left and bottom right cells in your table?
 - Is this worksheet the first (or only) worksheet in this workbook?

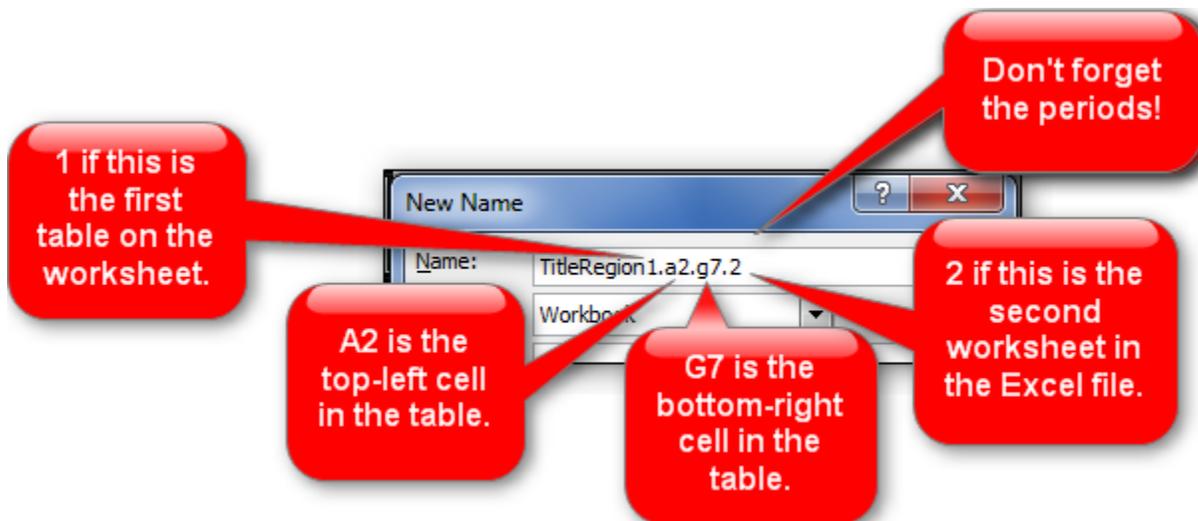
- To get started, select the top-left cell in your table. Don't count the titles, but you do count all row and column headers as part of your table.
- Go to the Formulas tab in the Ribbon, and choose Name Manager in the Defined Names group. Choose New in the top left corner. A new dialog box opens. In the Name field, we are going to type a fairly complicated name.



- Type TitleRegion then put a 1 if this is the first table on your worksheet; then a period; then the range of cells in your table from top left to bottom right (with a period in between); then another period; then the worksheet number. So in this case our Title code looks like this:

- TitleRegion1.a2.g7.2

You can ignore all other fields in this dialog box. Click OK and Close.



- You've just given JAWS the instructions for how to properly read the table so the listener can easily understand it.

6. If your table only has one column header, define a ColumnTitleRegion instead of a TitleRegion. If your table only has one row header, define a RowTitleRegion. The rest of the coding is the same.
7. If you create these titles and then make a simple change, such as moving your worksheet tabs around or adding an extra row, you'll have to recode the titles to match your spreadsheet's new reality. So save this step for when you are ready to publish.
8. If you do need to edit these names, go back to the Name Manager, select the name you wish to edit, and choose the Edit button.

Set Print Area

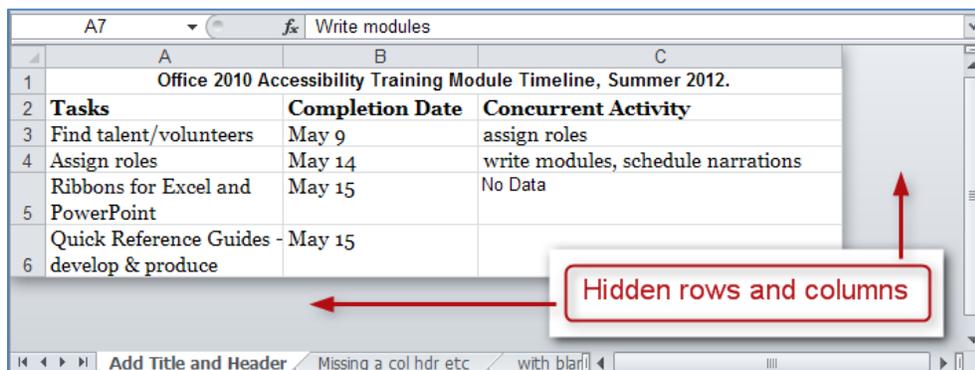
Ensure the print area is set correctly.



- Highlight the entire area of the table including titles and other information
- In the Ribbon, select the Page Layout tab.
- In the Page Setup group, select Print Area, and Set Print Area.

Hide Unused Rows and Columns

Hide extra rows and columns that are outside the print area. This makes the worksheet look less cluttered and prevents screen reader-users and keyboard navigators from wasting time wandering off into a trackless waste of blank cells.



To hide columns:

- To begin, select the first column you want to hide. Now, while holding down the Shift key, press and release the End key on your keyboard. Still holding down the Shift, now choose the right arrow key. This selects all columns from the first one you selected all the way to the right end of the spreadsheet.
- Now, with your cursor hovering in the selected area, right-click and choose Hide.
- To hide columns using the keyboard, select the columns you wish to hide and press Control+0 (zero).

To hide rows:

- To hide unused rows below your data, follow a similar procedure. Leave one blank row below your data, then select the first row you want to hide. Hold Shift as you press and release End and then press and release the down arrow key. Right-click and choose Hide.
- To hide rows using the keyboard, highlight the rows you wish to hide and press Control+9.

If you need to unhide these cells later follow these steps:

- First, select the last visible column.
- Next, hover just to the right of the right edge of the column header. Your cursor should turn from a single cursor with arrows into a double cursor with arrows. Click and drag to the right, exposing the very last column.
- Now select the new, final column, and right-click and choose Unhide.

Delete Unused Worksheets

Delete unused worksheets. Right-click on the tab of the unused worksheet and choose Delete. Confirm by selecting **Delete** in the dialog box that pops up.

Check Spelling

Be sure to do a spell-check. Unlike Word, Excel doesn't automatically put a squiggly red line under any word it thinks is misspelled.

- In the Review tab, choose Spelling in the Proofing group. Follow the prompts.
- Also, Excel will only spell-check one worksheet at a time, not the whole workbook.

Document Properties

Fill out the Document Properties to assist all people in finding your document if it gets put on a website.

Click the File tab, and choose the Info tab seen on the left. On the right side there is a frame containing the properties. You may insert your properties directly here, or access the traditional document properties by clicking the word Properties and choosing Show Document Panel.

When completing the document panel:

- For author, put Minnesota Department of Education
- Close the document properties by clicking on the X in the top right corner.
- Don't forget to save your document!