

## Step-by-Step

# Working With Spreadsheets in Excel

With Excel, you can use spreadsheets to organize, sort, and analyze information. In this Step-by-Step Card, you'll create a spreadsheet, use a formula to add numbers, and then produce a chart.

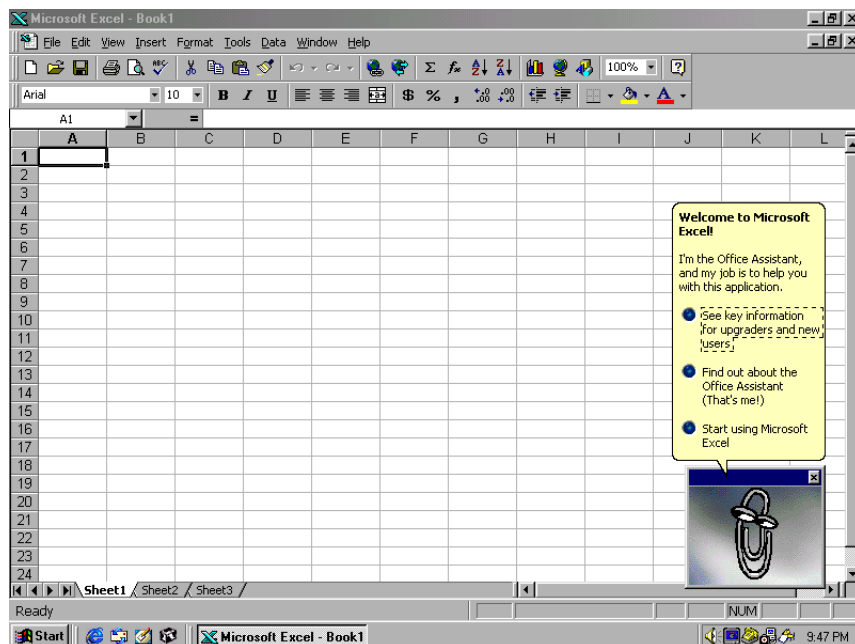
**Note:** These instructions are based on Microsoft Office 97. If you're using a different version of the software, some of the steps may vary slightly.

## Creating a new spreadsheet

- 1 Click the Start button, point to Programs, and click Microsoft Excel to open the program.

A new spreadsheet document, called a “workbook” in Excel, appears. Cell A1 is the active cell.

- 2 If necessary, click the “Start using Microsoft Excel” button in the Office Assistant window.

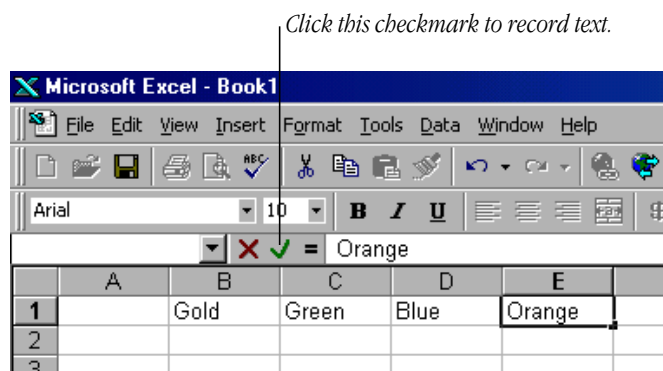



**Note:** A spreadsheet document is a grid of columns and rows. Each column is labeled with a letter at the top and each row is labeled with a number at the left. The intersection of a row and column is called a “cell” and is identified by its row and column number. A workbook document is composed of three individual spreadsheets, called “worksheets” or “sheets,” that you move between by clicking the tabs at the bottom of the workbook.

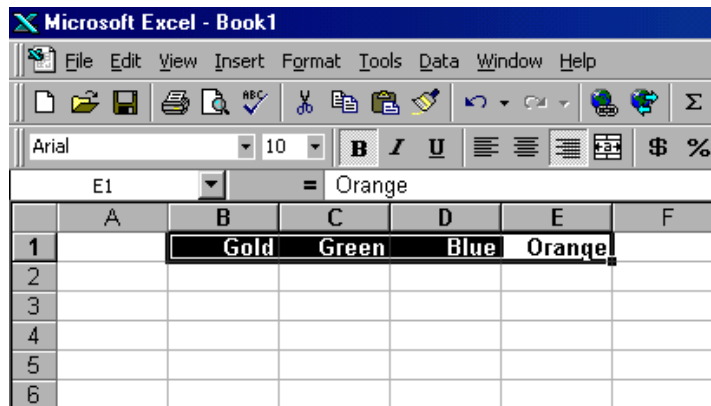
This spreadsheet will contain the results of a vote taken by a school’s fourth and fifth graders as to what the school colors should be. First, you’ll type the names of the colors being voted on across row 1.

### Adding the column headings

- 1 Click in cell B1. B1 becomes the active cell.
- 2 Type “Gold.” The text you type appears in the Formula Bar at the top of the spreadsheet. (You can enter data directly in a selected cell or in the Formula Bar.) Press Tab. The text is recorded in the cell and cell C1 becomes the active cell.  
**Note:** The key you press to record the text determines the next cell you move to. To move to the cell directly to the right, click Tab. To move to the cell directly below, click Enter. You can also use the arrow keys on the keyboard. To remain in a cell after you record text in that cell, click the green checkmark to the left of the Formula Bar.
- 3 Type “Green” in cell C1 and press Tab. You move to cell D1.  
**Tip:** If you make a mistake typing, make sure the cell is selected and then correct the mistake in the Formula Bar.
- 4 Type “Blue” in cell D1 and press Tab.
- 5 Type “Orange” in cell E1 and click the green checkmark to the left of the Formula Bar. The text is recorded.



- 6 Make sure cell E1 is still selected and drag to the left to select cells B1 to E1.
- 7 Click the **B** on the Formatting toolbar to make the text in the cells bold. Click the Align Right button  on the Formatting toolbar to right align the text within the cells.



- 8 Choose Save from the File menu. Name the file “Vote for School Colors,” select a location where you want to save it, and click Save.

### Adding the row headings

Now you’ll enter the room numbers of the classes in column A.

- 1 Click in cell A2.
- 2 Type “Room 101.” Press Enter. The information is recorded and you move down one cell.
- 3 Type “Room 103” in cell A3. Press Enter.
- 4 Type “Room 107” in cell A4 and press Enter.
- 5 Type “Room 201” in cell A5 and press Enter.
- 6 Type “Room 205” in cell A6 and press Enter.
- 7 Type “Room 209” in cell A7 and click the green checkmark.
- 8 Make sure cell A7 is still selected; then drag up to select cells A2 to A7. Click the B on the Formatting toolbar to make the text bold.

### Entering data

Next you’ll enter the voting data.

- 1 Click in cell B2. Type “9” and press Tab. Type “12” in cell C2 and press Tab. Type “3” in cell D2 and press Tab. Type “2” in cell E2 and press Enter.

- Enter the data for the other classrooms as follows, pressing Tab after the first three entries for a room and Enter after each “Orange” entry.

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	Gold	Green	Blue	Orange
Room 103	12	8	2	3
Room 107	6	8	10	1
Room 201	3	11	8	4
Room 205	9	9	5	3
Room 209	6	5	6	6

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Your spreadsheet should look like the following one:

	A	B	C	D	E	F	G
1		<b>Gold</b>	<b>Green</b>	<b>Blue</b>	<b>Orange</b>		
2	<b>Room 101</b>	9	12	3	2		
3	<b>Room 103</b>	12	8	2	3		
4	<b>Room 107</b>	6	8	10	1		
5	<b>Room 201</b>	3	11	8	4		
6	<b>Room 205</b>	9	9	5	3		
7	<b>Room 209</b>	6	5	6	6		
8							
9							
10							

- Choose Save from the File menu to save your changes.

### Adding up the vote

Next you’ll add up the vote, using the SUM function, a formula that has been defined for the software. First, you’ll label the row for the totals.

- Click in cell A8; then click in the Formula Bar and type “TOTAL.” Click the green checkmark.
- To change the alignment, make sure cell A8 is still selected; then click the Align Right button  on the Formatting toolbar.
- With cell A8 still selected, drag to the right to select cells A8 through E8 and click the B on the Formatting toolbar. “TOTAL” appears in bold. When text is entered in cells B8 through E8, it will also be bold.
- Click in cell B8. To total the vote for Gold, type =SUM(B2:B7). This formula tells the software to add the values in the cell range B2 through B7. Without the function SUM, the formula would read =B2+B3+B4+B5+B6+B7.

- 5 Press the Tab key. The total appears for Gold in cell B8, and you move to the cell to the right.

Next you'll add the figures in the Green column, using an even quicker method.

- 6 Cell C8 should be active. Click the AutoSum button  $\Sigma$  on the Standard toolbar. “=SUM(C2:C7)” appears in the Formula Bar and a blinking dotted line appears around the numbers in the column you want added.

Press Tab to total the numbers.

- 7 Use the AutoSum button to add the figures in column D for Blue and column E for Orange.

One of the student votes in Room 209 was left out and needs to be added. When you change one of the numbers, Excel automatically recalculates the total.

- 8 Click in cell D7 and change the amount from 6 to 7. Click the green checkmark. The sum changes from 34 to 35 in cell D8.

Green and Gold have won the student vote.

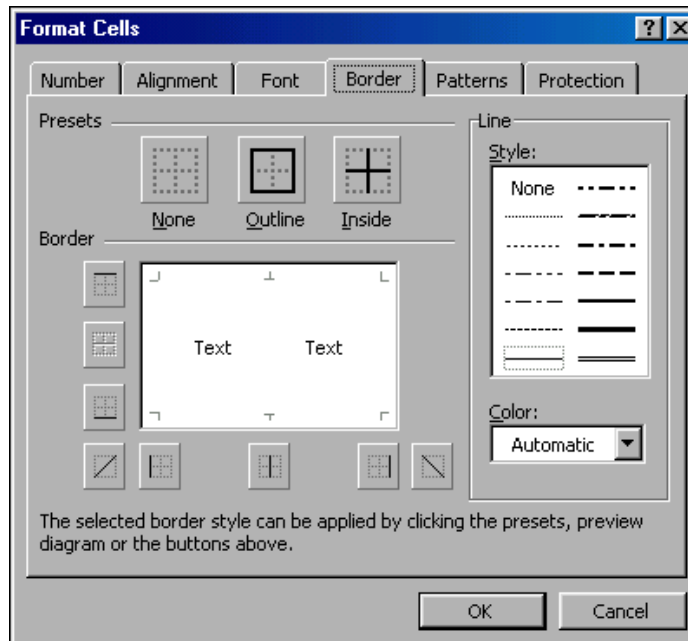
	A	B	C	D	E	F
1		<b>Gold</b>	<b>Green</b>	<b>Blue</b>	<b>Orange</b>	
2	<b>Room 101</b>	9	12	3	2	
3	<b>Room 103</b>	12	8	2	3	
4	<b>Room 107</b>	6	8	10	1	
5	<b>Room 201</b>	3	11	8	4	
6	<b>Room 205</b>	9	9	5	3	
7	<b>Room 209</b>	6	5	7	6	
8	<b>TOTAL</b>	<b>45</b>	<b>53</b>	<b>35</b>	<b>19</b>	
9						
10						
11						
12						

## Formatting the cells

You can format the cells in many different ways, including adding borders and colored text or fills.

- 1 Click in cell B8 and drag to the right to select cells B8 through E8.
- 2 Choose Cells from the Format menu.

- 3 Click the Border tab in the dialog box that appears.



- 4 In the Presets area at the top of the panel, click Outline and Inside. Click OK. A border surrounds each cell that contains a total.

The image shows a screenshot of Microsoft Excel with a spreadsheet titled 'Vote for School Colors'. The spreadsheet has columns A through F and rows 1 through 12. The data is as follows:


	A	B	C	D	E	F
1		<b>Gold</b>	<b>Green</b>	<b>Blue</b>	<b>Orange</b>	
2	<b>Room 101</b>	9	12	3	2	
3	<b>Room 103</b>	12	8	2	3	
4	<b>Room 107</b>	6	8	10	1	
5	<b>Room 201</b>	3	11	8	4	
6	<b>Room 205</b>	9	9	5	3	
7	<b>Room 209</b>	6	5	7	6	
8	<b>TOTAL</b>	<b>45</b>	<b>53</b>	<b>35</b>	<b>19</b>	
9						
10						
11						
12						

- 5 Save your changes.

## Creating a chart

Next you'll create a chart to display the Room 101 data. You can choose from a variety of chart types to graph data in a spreadsheet.

First you need to select the cells that contain the information you want to chart.

- 1 Click in cell A1. Drag to the right and down until cells A1 through E2 are selected.
- 2 Click the Chart Wizard button  on the Standard toolbar. (You can also choose Chart from the Insert menu.) The Chart Wizard dialog box appears.

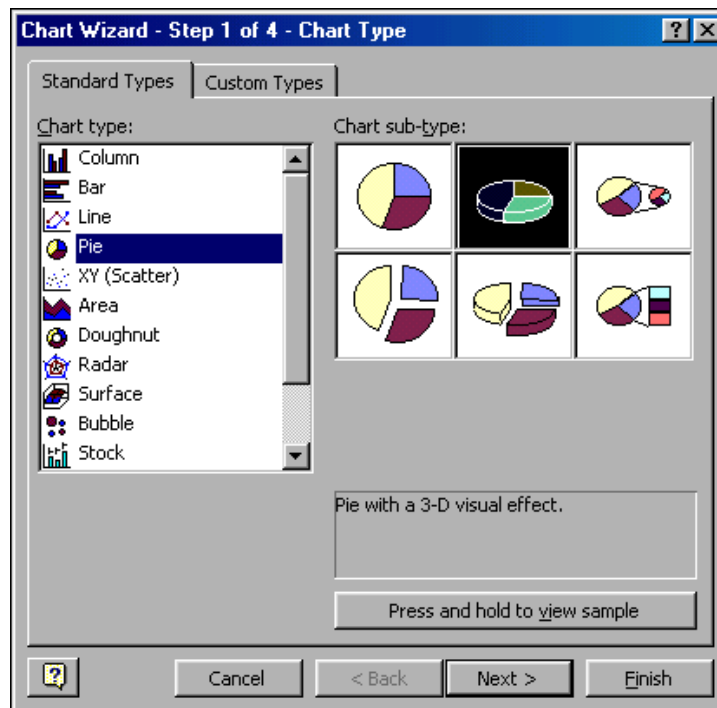
If the Office Assistant appears, offering you help, click "No, don't provide help now."

The default chart type, the Column style, is selected. Click the button labeled, "Press and hold to view sample." A preview of your data in this particular chart form appears.

- 3 Click any of the chart types that you want to preview and view them in the dialog box.

A pie chart is often a good choice to chart a single series of data like this one.

- 4 Click Pie in the list on the left.
- 5 Click the middle option in the top row, the pie chart with a 3-D visual effect.



- 6 Click Next.
- 7 Accept the settings as they appear in Step 2 of the Chart Wizard dialog box. Click Next.

- 8** In Step 3 of the dialog box, change the chart title to “Room 101 Vote Results.” Click the Data Labels tab and select “Show label and percent.” Click Next.
- 9** In Step 4 of the dialog box, select “As new sheet.” Replace the text “Chart1” with “Room 101.” Your chart will appear on a separate sheet instead of as part of the spreadsheet with the figures. Click Finish.

The pie chart appears on a separate sheet called “Room 101.”

### Customizing the chart

- 1** If the Chart toolbar is not visible, choose Toolbars from the View menu and Chart from the submenu. The following toolbar appears:



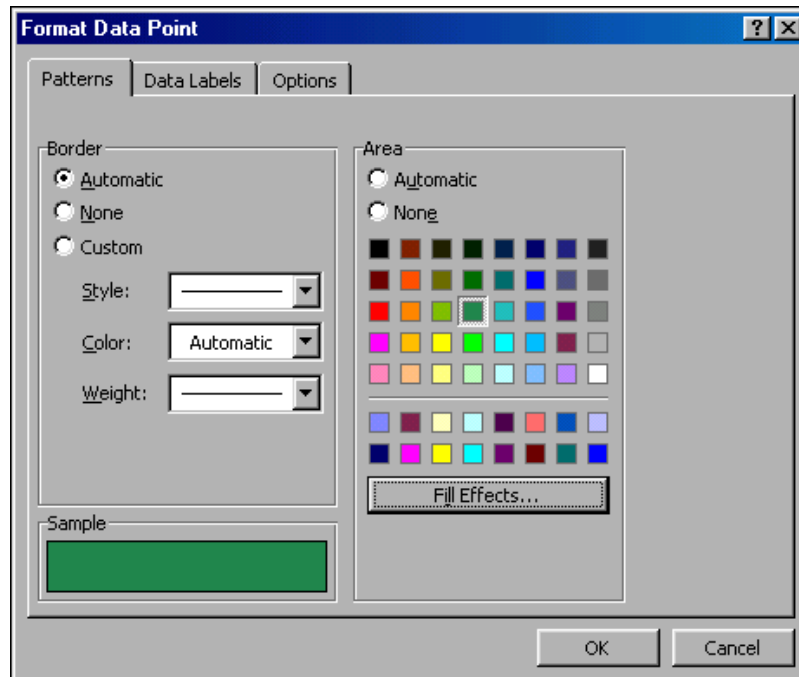
You will use this toolbar to change the font and enlarge the text for the chart title, legend, and data labels.

- 2** From the pop-up menu at the left end of the Chart toolbar, choose Chart Title. The title is selected.
- 3** On the Formatting toolbar above the worksheet window, choose Arial from the Font pop-up menu and 18 point from the Font Size pop-up menu.
- 4** From the Chart toolbar pop-up menu, choose Legend. The legend is selected.
- 5** On the Formatting toolbar, choose Arial from the Font pop-up menu and choose 14 point from the Font Size pop-up menu. Making the legend larger makes the chart slightly smaller.
- 6** Choose “Room 101” Data Labels from the Chart toolbar pop-up menu. Choose Arial 12 point for the labels.

Now change the color of each section of the pie so it matches the color voted on.

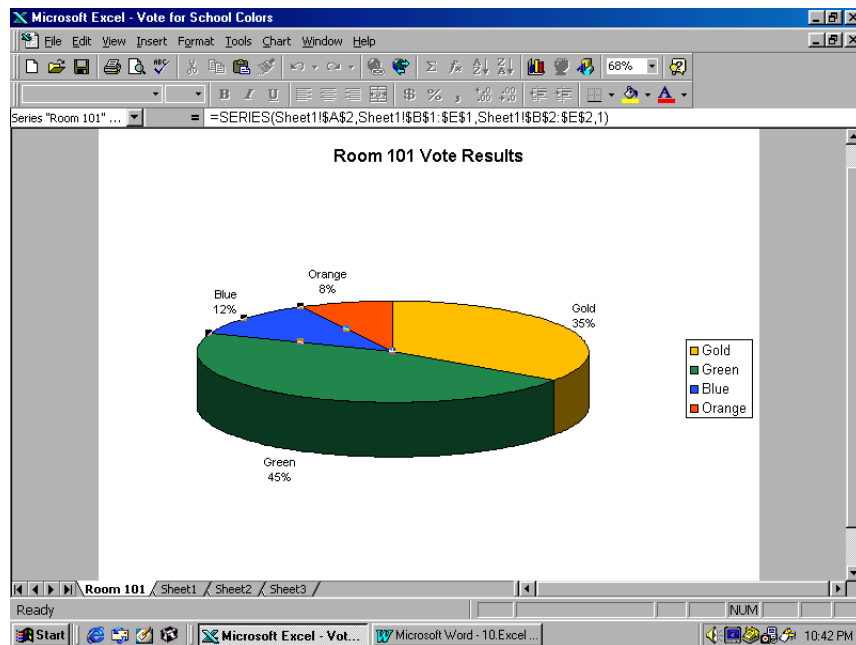
- 7** Click to select the pie; then click to select just the section showing the vote for Green. Double-click that section. The Format Data Point dialog box appears.

- 8 Click to select a shade of green. If you want to fill the section with a pattern or green texture, click Fill Effects; then click the Pattern tab and select a green pattern or click the Texture tab and select the green texture. When you're done, click OK.



- Tip:** Make sure only one section is selected at a time. If the whole pie is selected, and the Format Data Series dialog box appears instead of the Format Data Point dialog box, click Cancel to close the dialog box. Click to select the whole pie; then click to select a single section, and double-click the individual section.
- 9 Select the whole pie; then click the section showing the vote for Gold. Double-click that section of the pie and change its color, adding a pattern if you want.
  - 10 Use the same techniques to change the color of the sections for Blue and Orange.

**11** Save your changes.



**12** Click the Sheet1 tab at the bottom of the window to return to your worksheet.

If you have time, you can create charts that display the data for each other classroom, or create a chart that compares the data for all of the classes.