Grade Book

Many teachers keep track of their students' grades in a grade book. Typically teachers record the scores for different assignments and then use a calculator to calculate students' grades in a class or subject area. How might you be able to use a computer to make this process easier?

Plan It

Create a spreadsheet grade book based on the assignments and grading practices used in your classroom. Look at the following example:

	A	B	C	D	E	F	G	H
1	**Ms. Pickering's Mathematics Grade Book**							
2								
3	Student Name	Fractions Homework 1	Fractions Homework 2	Fractions Quiz	Decimals Homework 1	Decimals Quiz	Total Score	Average Score
4	Brown, Danielle	78	85	92	72	81	408	81.60
5	Gomez, Mauricio	92	88	94	100	95	469	93.80
6	Jones, Michael	69	74	52	80	75	350	70.00
7	Kim, Aisha	85	90	87	86	79	427	85.40
8	Thomas, Zachary	72	70	81	75	68	366	73.20

Mathematics

Grade Book Example

Think about the following questions, and if working with a partner, discuss your ideas. Writing your ideas on a sheet of paper and drawing a table that shows how you might put the information in order might be helpful.

- What school subjects do you teach? For which subject (or subjects) do you need to keep scores? Pick one subject for your grade book worksheet.

- What are the names of five students that could be used in the grade book?

- What are some possible scores that the students might have received for five different assessments or assignments?

- How might you organize the information so it is easy to read and understand?

Make sure you pick only one subject for your grade book worksheet. Some participants with contained classrooms may want to include multiple subjects. Please note that you can include the grades for other subjects on another worksheet, as is done in the second challenge in this activity.

You should feel free to use whatever grading system you are familiar with. However, make sure you use numeric scores (such as a 10-point scale or percentages) and not assigned letter grades. Depending on the system you use, you may have to create your own worksheet columns. For example, if a teacher uses pure percentages, then the Total Score column is not necessary.

For help on how to do certain tasks, look at the following groups in the *Help Guide:*

- **Spreadsheet Group 2:** Selecting Cells, Rows, and Columns

- **Spreadsheet Group 3:** Using Worksheets

- **Spreadsheet Group 4:** Adding and Working with Information

- **Spreadsheet Group 5:** Changing the Look of Information and Worksheets

- **Spreadsheet Group 7:** Doing Math

Do It

1. Start the spreadsheet software, and open a new, blank worksheet.

2. Rename Sheet 1 with the name of the school subject you selected.

3. In cell A1, type a title for the worksheet. Change the look of the title.

4. Now you will add the column headings to your worksheet. Type "Last Name" in cell A3 and "First Name" in cell B3. Then in cells C3 through F3, type information that identifies four of the five assessments and/or assignments that you want to include in the grade book. Lastly, type "Total Score" and "Average Score" in cells G3 and H3.

5. Change the look of the headings in row 3.

> **Challenge:** Consider rotating the column headings in cells C3 through H3 so they are placed at an angle. Then, add borders around the column heading cells. (See the Grade Book Mathematics Worksheet Challenge Example at the end of this section.) (For help, refer to Spreadsheet Skill 5.7: To change the alignment of information within a cell or cells.)

6. Change the width of columns B through H to fit the information. If your columns are still too wide, change the text wrapping so the information fits on two lines.

7. In cells A4 through A9, type the last names of the five students. Then in cells B4 through B9, type the students' first names. Change the column width if needed.

8. Type the scores for each assessment or assignment in the four cells to the right of each student's name.

9. In cell G4, insert a **Sum** function that will calculate the first student's total score. Then, fill the **Sum** function into the four cells below.

Step 2: You may be inclined to overlook this step, but as you learn to complete spreadsheet projects with multiple worksheets, naming your worksheets becomes increasingly useful. You can rename worksheets in two main ways. If needed, refer to Spreadsheet Skill 3.2: To give a worksheet a new name.

Step 4: Make sure that you only include four of the five assignments in the grade book at this time. You will add the fifth item in Step 14, which will allow you to see how calculations are automatically updated when information is changed.

Steps 4 and 7: You may want to add more than five graded assignments or more than five students. Complete the activity as written first. Then if time permits, you can add columns and rows of information later.

Step 8: When you enter the scores, you need to type the actual numerals and not the words for those numeric quantities. (For example, you should type the numeral *80* instead of the word *eighty*.) If you do not type numerals, the formulas and functions will not work properly in Steps 9–11.

Discovering Spreadsheets

10. In cell H4, insert an **Average** function that will calculate the first student's average score. Make sure the cell range includes only the cells with assignment scores (cells C4 through F4) and not the total score (cell G4).

11. Fill the **Average** function into the four cells below cell H4.

12. Change the average scores so they all have two decimal places. Change the column width as needed.

13. To make sure the grade book will work as it should when new grade scores are added later, insert a column between columns F and G.

14. In cell G3, type the name of the fifth assessment or assignment. Then, type the grade scores that each of the five students received on the fifth assignment.

    Notice that each student's total score and average score changes automatically when new information is added.

Step 15: The process of sorting information may be challenging. When you sort, do not select the rows containing the title and column headings. Also, explore various options until you achieve the desired results. If you do not sort correctly the first time, you can always use the **Undo** function to put the rows back in the previous order and try again.

15. Use the students' last names in column A to put rows 4 through 8 in alphabetical or ascending order. (For help, see Spreadsheet Skill 6.7: To sort or change the order of rows based on certain information.)

16. Add borders around the worksheet cells. (For help, see Spreadsheet Skill 5.8: To add borders to cells, rows, columns, and worksheets.)

> **Challenge:** You might want to make another grade book worksheet for a second school subject. To do this, duplicate the worksheet you just created and give it a new name. (For help, see Spreadsheet Skill 3.6: To make a copy of a worksheet.) Then, change the worksheet title, and put in new assessment or assignment scores for the students. You should also rename the worksheet's tab. (See the Challenge Examples at the end of this section.)

17. Delete any unused worksheets.

Step 18: If you will be completing the Roll Book activity, you should save your work in a place where you can access it easily. If you will not be sitting at the same computer during the second activity, consider saving your file to a disk.

18. Save your work as directed.

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Mathematics / Science /

Grade Book Mathematics Worksheet Challenge Example

Module 8

Discovering Spreadsheets

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	A	B	C	D	E	F	G	H	I
1	**Ms. Pickering's Science Grade Book**								
2									
3	Last Name	First Name	Parts of a Cell Worksheet	Plant Cell Lab Worksheet	Cell Quiz	Photosynthesis Worksheet	Photosynthesis Quiz	Total Score	Average Score
4	Brown	Danielle	78	83	79	81	84	405	81.00
5	Gomez	Maruicio	89	84	81	82	79	415	83.00
6	Jones	Michael	75	73	68	77	83	376	75.20
7	Kim	Aisha	96	92	89	94	87	458	91.60
8	Thomas	Zachary	69	77	74	76	63	359	71.80

Mathematics \ Science

Grade Book Science Worksheet Challenge Example

Review It

Look over your grade book worksheet. Make sure it has the following elements:

- A title that explains the type of information in the worksheet

- The names of five students sorted in alphabetical order

- Formulas that calculate each student's total score and average score

- New names on all used worksheets, with all unused worksheets deleted

If any elements are missing, add them to the worksheet now. You should also make other desired changes. Remember to save your work when you are finished.

Share It

Be prepared to discuss your answers to the following questions during sharing time:

- How might this grade book improve your ability to calculate your students' grades? How would you modify the spreadsheet you created today for your own use?

- What is the most useful spreadsheet feature that you used today? Why?

- For what other types of activities might you use a spreadsheet's **Sum** and **Average** functions?