

Let's Do Lunch!

The cafeteria is being shut down for a week! It's up to you to plan lunch for your whole class for five school days. You will do your shopping on line, and they will deliver. Here is what you need to buy for each student:

- A cold cut sandwich, using $\frac{1}{4}$ pound of cold cuts and two slices of bread.
- One piece of fruit.
- One cup of beverage.
- Two regular size cookies or one giant cookie.



You know your friends can be pretty picky about what they eat, so you have to offer at least 2 choices of everything.

You will have to order fresh cold cuts every day, but the other foods can keep from day to day. Don't forget to use all the leftovers!

You will have to figure out how many portions are in each package of food. Look at the information on the package, including the nutritional information, to figure out the number of portions in each package.

Many students like mustard, ketchup, and mayo on their sandwiches. Plan on having each student use $\frac{1}{4}$ of an ounce of one condiment each day. You can buy large containers, because these can be kept in the school refrigerator.

You don't have to worry about paper plates or any of those supplies, the school has plenty.

Spend wisely! You only have \$100 a day to feed the whole class. Use a spreadsheet to help you keep track of your expenses.

Grade 5 Let's Do Lunch
(GWM Topics 11, 12 and 13)

Darien Public Schools Elementary Curriculum Objectives addressed in this lesson

- Add and subtract 2, 3, and 4 digit whole numbers and money amounts less than \$100.00*
- Identify the appropriate operation or number sentence to solve any story problem*
- Estimate, act out, trade, and write equations and use calculators to solve money problems
- Multiply and divide 2 and 3 digit whole numbers by money amounts less than \$10.00 by 1 digit numbers*
- Add and subtract fractions and mixed numbers with like denominators*
- Estimate and use a calculator to solve practical problems involving fractions, mixed numbers, decimals, and percents
- Solve two step problems involving whole numbers and money amounts
- Identify appropriate customary or metric units of measure (length, capacity, mass) for a given situation. Create bar graphs and pictographs from data in tables and charts*
- Identify correct information from graphs, tables, and charts
- Solve problems involving the organization of data*

Darien Public Schools Instructional Technology Standards addressed in this lesson

- Use keyboard and other common input and output devices efficiently and effectively
- Independently operate school computers and demonstrate ability to use software and special features
- Investigate software to create products in a range of formats
- Demonstrate the ability to use basic features, entering information and data, create and use word processing, spreadsheets, and databases
- Use Internet resources and other electronic information resources with assistance

Lesson objective(s):

Students will apply a variety of math and computer skills to solve the practical problem of planning a week of lunches for a class of students.

- The students will gather data about food products, pricing, package sizes, etc. from the website Peapod.com.
- They will need to figure out servings by translating different measurements such as pounds and ounces, quarts and cups, and servings per package.
- They will use a spreadsheet to organize and calculate data.

Prerequisite skills, materials and equipment needed

Knowledge of customary wet and dry measurements

Assignment sheet

Computers equipped with AppleWorks 6.2

Internet access

Suggested time period needed to complete lesson

- One 40-minute classroom lesson to introduce the assignment
- Two 50-minute computer lab sessions

Lesson design**Distribute & Discuss Assignment Sheet:**

Explain the lesson to the students. Through a whole group discussion, determine what information needs to be recorded on a spreadsheet and what calculations need to be performed to complete the assignment. You may wish to do this by providing an example of a day's menu. The information that will be required includes:

- Day
- Items Purchased
- Servings per Package
- Number of Packages Needed
- Cost per Package
- Sub-total per item (# packages x cost per pkg)
- Daily Totals
- Left over servings

The headings for each spreadsheet column should be recorded by each team and brought to the computer lab.

Introduce Peapod.com

It would be ideal to introduce the website Peapod.com initially when discussing the assignment. Use the monitor in the classroom or, if available, a digital projector.

1. Launch Internet Explorer
2. Enter the url www.peapod.com
3. If you have not used the website before, click on "Groceries for Your Home." You will have to enter the local zip code to begin, but you do not need to enter any personal information.
4. Go to the tab Browse Aisles to locate items
5. Go to one of the categories in which the students will have to make purchases. For example, in the General Grocery, go to the Bread & Bakeshop, then Breads, then White.
6. Select any item and click on the name. The nutritional information is displayed, including the number of servings per package.
7. Students can compare unit prices to find better values.
8. To exit a particular food category and go back to the main directory, click the Browse Aisles tab again.

Practice or activity**Classroom practice:**

1. Organize students in pairs
2. Provide students with some sample products and prices
3. Have the students organize a table that will be a model for the spreadsheet
4. Have students figure out one day's menu and budget

In Computer Lab**Setup:**

1. Click the Excel icon on the Toolbar OR Click the Start button. Slide up to Programs, right to Microsoft Excel.
2. Save the document in one student's folder, giving it the name lunchxxyy, with the students' two sets of initials.
3. Go to the File menu and select Page Setup. Go to the Page tab and select Landscape.
4. Still in Page Setup, go to the Sheet tab and click Gridlines and Row and column headings.
5. Still in Page Setup, go to the Header/Footer tab and click Custom Header. Add the title "Let's Do Lunch" and the names of the students in the team.

Enter Column Headings:

1. Ideally, students should have planned the spreadsheet on paper in the classroom before coming to the lab.
2. In cell A1, type the word Day and press Tab.
3. In cell B1, type the word Item and press Tab.
4. In cell C1, type Servings/pkg and press Tab.
5. In cell D1, type # Packages and press Tab.
6. In cell E1, type Price/pkg and press Tab.
7. In cell F1, type the word Sub-Total and press Tab.
8. In cell G1, type the words Day's Exp. and press Tab.
9. In cell H1, type the word Leftovers and press Tab.
10. In cell A2 type the word Monday.

Format the Columns

1. To make Column B wider, click on the letter B to select the column. Place the cursor on the line between B and C so that the cursor becomes a double-headed arrow. Widen the column to about 20.
2. Select columns E, F, and G by dragging the cursor across the letters at the top. Go to the Format menu and choose Cells. Then choose Currency.
3. Select rows 1 and 2 by clicking on the numbers at the beginning of the row. On the toolbar, click the B for Bold.

Enter Calculations

1. Click in cell F2. This will be the cost of buying multiple packages of one type of item.
2. Type =SUM with no space between the equal sign and the word and with all capitals for the word sum.
3. Type an opening parenthesis (then click in D2.
4. To multiply, type an asterisk * using either the 8 key with the shift or the * key on the number pad.
5. Click in cell E2. Then close the parenthesis.
6. The formula will be =SUM(D2*E2)
7. Press tab.
8. To calculate a subtotal for Monday, click in cell G13.
9. Click the AutoSum symbol in the tool bar.
10. Drag the cursor so cells F2 to F12 are selected and surrounded by the dotted line. Press tab.

11. The daily subtotal will need to be calculated for each day of the week, but it is not necessary to wait until all items are listed to do this. Doing it earlier maintains a running total. Allow about 10 rows for entering items to be purchased.

Print

1. To select the exact area you want to print, click and drag to create a box around the area you want. (Notice the dotted lines that mark the edges of the page.) Then go to the File menu, choose Print Area and Select Print Area.
2. To include row and column headings and grid lines, go to the File menu, select Page Setup and the Sheet tab. Select the Row and Column Headings check box and select the Gridlines check box.
3. To print, go to the File menu and select Print. Click OK.

Formative assessment

1. Working initially in a whole group, the teacher should ask students to contribute to the plan for the spreadsheet. This should indicate their understanding of the assignment as a whole and the operations required at each step.
2. During lab time, teachers should circulate, making sure students are successfully completing the assignment

Closure

Our activity today shows us how useful math can be in solving every-day problems. The spreadsheet really helped us keep the information organized. It's handy that the spreadsheet did a lot of the calculations for us, but remember that the spreadsheet can only do the work you tell it to do.

Summative assessment

Check students' spreadsheets to make sure the information they have recorded fulfills the assignment.

Continuation/follow-up

- Have students create posters with their daily menus
- Have teams present their menus and let the class vote on the best menu
- Have students design their own project in which they use a spreadsheet to organize a budget (a party, an outing to a sports event, a vacation)

Teacher reflection: (for teachers to complete after using lesson)

1. Did students achieve the intended objective?
2. How do you know?
3. Did the activity aid in understanding the GWM topic?
4. How?

Day	Item	Servings/pkg	# Packages	Price/Pkg	Sub-Total	Day's Exp.	Leftovers
Monday					\$0.00		
	Freihoffer 24 oz	12	3	\$2.49	\$7.47		9
	Bologna 1 lb	4	3	\$5.79	\$17.37		
	Salami 1 lb	4	3.5	\$4.59	\$16.07		1
	French's 24 oz	96	1	\$1.89	\$1.89		71
	apples	1	25	\$0.59	\$14.75		12
	pears	1	25	\$0.69	\$17.25		13
	Oreos	25	1	\$3.99	\$3.99		10
	Oatmeal	19	2	\$3.29	\$6.58		9
	cookies						
	Coke	8	2	\$1.29	\$2.58		
	apple juice	8	2	\$1.69	\$3.38		
Subtotal						\$91.33	