

## Lead Student Lesson Plan

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### L07: Formulas & Spreadsheet Usage

#### Main Purposes

- **Answer questions:** There may be some in the class who are struggling and need some help. Using some time to help them overcome the issues is great. However, spending too much time on questions will take away from the activities that need group participation at the end of the lesson. If questions are too long for the gathering, be sure to remind everyone that tutoring is instantly available at [byui.edu/mathhelp](http://byui.edu/mathhelp), and that they can get a personal tutor to meet with them if they would like.
- **Use Spreadsheets:** It is true that calculators are awesome, but a spreadsheet is like a thousand of them rolled up into one. This set of Exercises is especially written to help students understand and feel comfortable doing single calculations in their calculator and then seeing the spreadsheet do many of them quickly.
- **Laptops:** Because this lesson focuses so much on the spreadsheets, please try to have as many laptops or computers there as can be reasonably arranged for the students to try these things out. If that simply isn't possible, do a lot of drawing boxes (spreadsheet cells) on the chalkboard and writing in the formulas to use.
- **Portfolio Update:** With the ability to use formulas in spreadsheets, students will now be able to update their "Budget and Expense" portfolio project. They will be expected to use the SUM formula and possibly others to make their document more efficient.
- **Help others:** Some students who are still not comfortable with spreadsheets may need some individual help to pick up on small things like using the "=" sign before entering a formula.
- **Prepare for the Exam:** The Visual Chart for Exam 2 is coming up. Remind everyone what it is and what it should look like.

#### Student Preparation

Students were asked to prepare for gathering by completing specific activities and/or pondering certain questions. Please refer to the gathering instructions in this week's unit or lesson in the course.

#### Lesson Outline

As the Lead Student this week you will facilitate the Thursday Gathering. The times given for each activity are suggested times. The Gathering should not last more than 60 minutes. Try to make sure that the main purposes of the gathering are met each week.

OPENING	LED BY MISSIONARIES
<p><b>Announcements, Hymn, and Prayer</b></p> <p>(10 minutes)</p>	<p>Announcements</p> <p>Opening Hymn: Chosen by missionaries</p> <p>Opening Prayer: By Invitation</p>
CLASS ACTIVITIES	LED BY LEAD STUDENT
<p><b>Math Exercise 2.3 Part A</b></p> <p>(5 minutes)</p>	<p><b>Whole Class</b></p> <p>Review this week's <u>Math Exercise 2.3 Part A</u> homework problems. If there are questions about the assignments, work out a few of the most difficult problems together as a whole group or in small groups of 3-4 people.</p> <p><b>Either A:</b> Ask for a volunteer who understands the difficult problems and can explain how to complete the problem. (It may help to remind people that being able to explain something to someone else is a great way to reinforce one's own learning. Try to include everyone.)</p> <p><b>Or B:</b> In small groups, work through one or two of each type of problem in the homework, letting each group decide which problems they want to work through together.</p>
<p><b>Math Exercise 2.3 Part B</b></p> <p>(15 minutes)</p>	<p><b>Small Groups</b></p> <p>Divide the class into groups of 3-5.</p> <p>Work through the problems in <u>Math Exercise 2.3 Part B</u>; rotate the responsibility to explain how to do each problem through the group. If a student doesn't know how to do a problem when it is their turn, they should explain as much as possible and then the rest of the group should help finish the problem. Then, the student should explain how to solve the problem back to the group.</p> <ul style="list-style-type: none"> <li>▪ <b>#1-4</b> are all dealing with the same problem. The organization of the exercises allows you to do the problem with both a calculator and a spreadsheet as well as make certain that you can get the units correct.</li> <li>▪ <b>#5-8</b> are all dealing with the same problem. The organization of the exercises allows you to do the problem with both a calculator and a spreadsheet as well as make certain that you can get the units correct.</li> <li>▪ <b>#9</b> is specifically for use with the spreadsheet and will be long and tedious (more than usual) with just a calculator. The goal is not just to get the answer, but to get it with the spreadsheet. The key is to get a formula like =B2*1.07+25 in the cell C2 and then a formula like =C2 in the cell B3 to make sure to carry the end balance of one row to the beginning balance of</li> </ul>

	<p>the next row. Then copy each formula and paste it down to the 15<sup>th</sup> year. Check the second or third year with the calculator just to make sure it is working. Get with a tutor if it doesn't, and you can't figure it out.</p>
<p><b>Income Discussion</b>  (5 minutes)</p>	<p><b>Small Groups</b></p> <p><b>#10</b> In the same small groups, you will prepare a lifelong income example.</p> <p>Select a typical job that one of you expects to have within the next five years.</p> <p>Then, open a spreadsheet document and go through a lifelong income example together in this section (pg 82). If nobody has a laptop, draw it on the board. How much money do you expect to earn over your lifetime?</p>
<p><b>Formula Review and Problem Solving</b>  (10 minutes)</p>	<p><b>Small Groups</b></p> <p>In the same small groups, prepare for Exam 2 and review several formulas used this week. Even though you get a formula sheet on the exam, everyone needs to become familiar with the formulas and how to use them.</p> <ul style="list-style-type: none"> <li>▪ In each group, select those which anyone in the group found to be challenging. Make sure everyone understands how the problems are solved.</li> <li>▪ After reviewing the formulas, complete the questions from 2.3B as a group.</li> </ul>
<p><b>Formula Memorization</b>  (15 minutes)</p>	<p><b>Advanced Preparation:</b> Prepare math formulas and formula names before class. Bring tape. Choose 15–20 formulas. Write the name of each formula and the formula itself on two different pieces of paper. Tape the pieces of paper to the board with the writing side facing the board.</p> <p><b>Whole Class</b></p> <p>Formula Memory Activity</p> <ul style="list-style-type: none"> <li>▪ One student will choose a paper and turn it over.</li> <li>▪ Then, the student will try to find the correct match by turning over another piece of paper.</li> <li>▪ If the student does not make a match, a new student will take a turn.</li> <li>▪ When the student makes a match he/she takes the two papers off the board and can take another turn.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Continue this until all the formulas and their correct matches have been done.</li> <li>▪ After the activity, ask the students if there are any formulas that they do not know how to solve. Make sure everyone can solve each of the formula problems.</li> </ul>
<b>Personal Experience/ Testimony</b>	<p><b>Lead Student to Class</b></p> <p>As appropriate, bear your testimony as it pertains to this lesson, this course, or your experiences with the math or personal finance concepts you have learned.</p>
<b>CLOSING</b>	<b>LED BY MISSIONARIES</b>
<b>Prayer</b>	Closing Prayer: By Invitation

Remember: You need to be able to contact each other and stay organized. Use the method that works best for your gathering group (texts, email, Facebook, etc.).

## Note

*Please download and print a copy of these instructions to use as a reference during Thursday's Pathway Gathering.*