

## Excelling in Excel: Advanced

ALEX MURPHY: Hello everyone, and welcome to our Excelling in Excel: Advanced Session with Stoney Brooks. My name is Alex Murphy. I'm the program coordinator with Global Connections. If I could just ask all of you to raise your hand-- it's in the top left corner of the Blackboard Collaborate room-- if you can hear me. Just want to make sure everyone's hearing is-- everyone's audio is working. Great. All right, I think we're good to go.

So I'm excited to introduce Stoney Brooks. He is the assistant professor of computer information systems at Middle Tennessee State University. He got his PhD from WSU in 2013 and tonight he is going to do his second webinar in a two part series, Excelling in Excel. He's going to be walking us through how to create a family monthly budget planning worksheet.

So I assume that all of you have the budget planning worksheet that I sent out about a week ago. But if you don't have it and you would like a copy of it just type your email into the chat box and I will email it to you right now.

So without further ado, I'm going to turn it over to Stoney. And if any of you have any technical difficulties, or if you have questions, feel free to type them into the chat box. And enjoy.

STONE BROOKS: All right, there we go. Good evening, everybody. It's nice to see you all again. A pleasure to be back. Once again, to be able to dig a little bit deeper into some of these excel works that we were talking about last time. To Victoria's question, yes. We're going to be working on the original one that we sent out last week. So I appreciate all the feedback and all the comments that we had from the webinar last week. It was a great time. I hope-- I'm assuming it was a value for you. Otherwise you wouldn't be back again this week.

The vote was really close between this one and the student GPA tracker. So going between the two, realizing that that GPA tracker is actually fairly complex and we just don't have the time that we need during this webinar to really be able to get into the details of it. But this budget planner is something that we can do. And so that is what we are going to approach tonight.

Once again, I am going to try my best to go slow enough to not leave anybody behind and fast enough to keep you into it. But if at any time you have questions, you need me to slow down, repeat, anything like that, please just let us know in the chat box and I will do whatever I can to make sure we're all on the same page.

All right, hello folks. I do apologize for that wait, that was unintended. Well I guess our workaround right now is that I'm just going to share my entire desktop with you versus just the application like we did last time. I was reading a little bit about the error and there might be something with my Java settings. I don't know how that happened, but we don't have time to go through all that right now. So we'll just make it work as best we can.

So can somebody please confirm or deny that we can see my Excel right now? Oh, wonderful. Wonderful, great. OK. The joy of technology, we've got to roll with the punches. OK. Beautiful. Well then. Now let's get started. And once again, my apologies everyone.

So we need to start working on our family budget spreadsheet here. This one was just a single sheet. It was not the multiple sheets. So everything that we're going to need will be here on this one worksheet that we can see. And well, you're welcome, Global Campus.

Before designing any kind of worksheet, before we ever start typing a single thing into this page, the absolute most important thing to do is plan what it is specifically that we're trying to accomplish. If you start with the goal in mind it's going to make everything flow so much smoother.

So this could be potentially time consuming. If we're thinking about a family budget, what are all different things that we need to budget for? How do we want to classify those things? How do we want to categorize those things?

Fortunately, that sheet that we used last week gave us a pretty good place to start that already. So we might be able to cheat a little bit with that. A little bit. I don't have it pulled up right now so I might need some help from you all. But without a plan in mind we're just fumbling around right here. So that is number one, the most important thing that we've got to do.

So let's assume we've got a little bit of a plan mind. Now we can get started. The first thing that you'll want to do anytime is to make sure you find a nice-- sorry. The first thing that you want to do once you're in Excel. What you'll want to do is find a good name and a good place to save it. So I'm going to save this into my Excel webinar folder, my one drive, when it feels like working. Or not. Wow. [INAUDIBLE]

Well, there's the original four we had. I'm going to call this budget demo, because that's what we're doing right now. By having a good place to save it, and having a good name, you're not to lose it. And you're also not going to lose track of it. Because we want to save often. Always, always save often. OK. Got a good name.

Now, let's start cleaning this thing up and making it look the way we want it to. I'm going to zoom in a bit to make it easier for everyone to see here. If you remember, or if you have that initial template up, this top section here was a nice little intro header speaking about what this is. The family monthly budget planner. And it had a little chart over here showing our projected and our actual expenses.

Well, unfortunately those are the things that come last. We do not start out with that stuff. But we get that after we put everything else into place. Excuse me. So we first, then-- I keep saying we first, I apologize. To get this started we need to begin categorizing our information.

So first things first let's talk about the good stuff, the income. Everybody likes their money. I know I do. So we remember that we had a few different categories here. A couple things that we started out with were projected, actual, and the variance, or the difference, between the two. These are going to be our column titles in our little tables of data to help us keep track of which is which. Just type those in.

Currently I'm going to left click and drag across all three so that I highlight all three of these. And click the Center Alignment button up here in the top in order to just make them standard and centered here in these cells. Projected, Actual, and Variance.

Over here on the left side I can start thinking about what are the different line items, of sort, that we would want to keep track of as far as cash flow goes? Or, maybe we should call this Income. As I said, I like income. So we're going to start-- I'm going to put in Stoney's Income. Second I'll put in my wife's, Ashley's Income. We can throw in Lottery Winnings because I'm an optimist. Except I'm going to try to spell it correctly. And it never hurts to have a nice section for other, just those random things.

To make this look a little sharper, because you'll notice that these words are now bleeding over a bit, we have two different options. We can make the column itself wider. Or we can wrap text to make it thicker. I'll show you what I mean. If we left click and drag across all of these and decide to wrap text it makes it thicker so the actual words themselves become larger.

And that, it's OK. I'm not a big fan of that look myself. So I'm going to press Control Z to undo that. Otherwise you can click the Undo button, which is right up next to our Save button. And I'm going to widen the columns, then.

Now, a couple ways to widen the column. You can move your mouse to the space between column C and column D, because that's what we're working on right now, and the mouse cursor itself will change into almost this four pointed arrow thing. When you have that, if you left click and drag you can manually change the width of your columns to however large you want. You can make it huge if you want to.

Or, if you're not quite sure how big to make it, if you hover your mouse cursor over this and double left click it will set it to a size appropriate for the largest thing in that column. So the largest thing in this is Lottery Winnings. It sticks out the furthest. So by double clicking that it automatically set it nicely for that. OK.

So this is a good place to start. This is all nice and good. But it doesn't really look very pretty yet, does it? Let's do something about that. A lot of the power from Excel can come through the use of tabling the data. Now, to table the data you take this stuff that we've entered in and tell Excel that we're grouping it together as related information. When we do that Excel can treat it as though it all belongs together, and so we can interface with it in special ways that you're going to see in a little bit.

To start out the table this, I am going to highlight this nice cross section of data making sure I have all of my column titles and all of my row titles, as well. Excuse me. And then up here in about the top center of mine you'll see this button that says format as table. This is what we need to do.

Now when we do that we get a whole options here of different styles. Now these styles do not have any impact whatsoever on functionality. This right now is purely about look. What do you want this to look like? One really cool thing is that you can keep changing it over and over and over again until you find the one you like the best.

For now I'm going to choose Table Style Medium Two. It's the blue one in the top line of the medium section. Now this lovely little window here will pop up. Where is the data? You'll notice that it put in the references to our data already for us. Thank you, Excel.

And you want to make sure you check My Table Has Headers. With that it recognizes that projected, actual, and variants are actually the column titles and not pieces of data themselves. This is important. Click OK and you'll see we've got something that looks a little bit nicer.

We're still a little cluttered, here. These arrows are covering up some of our words so I'm just going to expand out these columns a little bit for now. Make it look a little sharper. And this column one title up here isn't very convincing as something useful, too. So I'm going to rename it to Income Source. That seems to be a bit more beneficial.

OK. So we now have a table of information. We've got our different income sources here on the left. We have our columns to categorize here on the right. Let's go ahead and enter in some of this stuff. So these numbers, obviously, will change depending on who's doing this. I'm just going to throw in a couple random numbers.

Let's say for this month I expect \$2,500. And my wife will also bring in \$2,500. I'm hoping to make \$250 in the lottery. And somebody will give me a \$20 tip for being a great professor. I can hope, I suppose. I'm talking too much.

OK. So we've got some information in here. We can make this look prettier, too. These numbers don't really fit nicely. They're all just right alignment and, I don't know. I don't like the way this looks. Let's do something about it, too. I'm going to click and drag across all the areas where my numbers are going to be so that I highlight this box, right click, and choose Format Cells.

There's a lot of power in this Format Cells, here. There are many different things that you can do. What we want right now-- we can change the alignment, we can change the fonts, we can change the color of the text, that's all in here-- but what we want is this Number tab.

Here in the Number tab we get some options on how we want these numbers to be actually presented. As a time, as a date, as a percentage. In this case I want to go with currency. It's

money, after all. So currency makes me happy. And I don't really want decimal places. If you do, leave it in. I don't so I'm going to set it down to zero.

Once I've got that right I hit OK. Now it was like money. I could also center align it if I want to. I could right align it if I want to. But actually, you know what? I'm going to leave it right aligned like that. That looks fine to me. OK. That's great.

To make things look a-- to make our calculations a little bit better let's add in some actual values, too. So I brought in 2,500. My wife also brought in 2,500. I didn't win squat in the lotto. But somebody gave me a \$50 tip instead of the \$20 tip. So good day, I suppose.

Now the variance. OK. There's a couple of different ways that we can approach this. But instead of just doing basic math, I can type in zero because there's no difference between these two numbers. But then we're not really using the power that Excel allows us to build in with formulas.

So with this variance what we can do is start with a formula. Now I need to type this formula up here so that people can see it. I don't know how well you all can see my formula bar. And I will explain this in just a second. Got to make sure it works first before I tell you all the wrong thing. All right. Let's make sure that this works.

Hey, what do you know? OK. So this formula right here will help us calculate-- now, I had a feeling that it'd be a little hard to see. That's why I wanted to make sure to get it zoomed in here for you all.

So this formula right here will calculate the variance for us. And I'll explain this. All Excel formulas start out with the equal sign. That's how we tell Excel that we're trying to do a formula, not just typing in words.

At projected. What is at projected? Well this is where we get to use the lovely structure that is this table here. If we say at projected we're telling Excel to take a look at the value that's in this column, called Projected. If this was named Stoney Is Awesome then we would say at Stoney Is Awesome. It's the name of this column.

So we're saying take the value in the projected column and subtract the value in the actual column. That's all this is. But by using these column titles here we get to use the power of the table. And you'll see once we put in once it took all the way down throughout this table for us. We didn't even have to manually put it in in every place. One more joy of tables. Saving you time.

All right. Let's zoom out a little bit. Whoops. Sorry about that, folks. OK. So you'll see variance. So zero, zero, 250, which means that-- uh-oh. Looks like, I don't know. I put the formula in backwards, didn't I? Because my variance should be \$250 less because I made \$250 less than I was expecting.

So let's fix that real quick. Change it to at actual minus at projected. And now we get the numbers that we wanted to see. So no difference between my projected and actual on my incomes. I got \$250 less than I was expecting in lottery but I made \$30 more than expected in my other category.

All right. But we're still not all the way there yet. I'm going to go ahead and take the currency formatting off of this number. I'm just going to make it a regular number because I feel that the dollar signs just kind of get in the way with what we're about to do.

Now, just to add an extra level of visual to it, we're going to add on those little colored dots. If you remember back to our template worksheet each number had a little colored dot next to it to show green is good, red is bad, and yellow if everything was equal. How do we get those? It's actually pretty simple. Let me show you how.

I'm going to highlight all of these variant values here. And what we want to do is use Conditional Formatting. Now there's a lot of different options in Conditional Formatting. It's one of my personal favorite tools in all of Excel because you can use it to visualize things a lot faster than just looking at black and white text.

So what we want is to go into Conditional Formatting and use Icon Sets. By hovering over Icon Sets you can see this first option here in Shapes. We have our green, yellow, and red dot. Go ahead and click on those now. All right, we're halfway there. Our red dot for negative is right, but a green dot for zero, that's not right. Well we have to tell this Conditional Formatting where the levels are that we want to show the certain colors at.

Now, OK. Sorry. I forgot where I was going with that real quick. So now that we still have these particular conditionally formatted cells highlighted we want to go back to the Conditional Formatting and go down to Manage Rules. It's the bottom option here. You'll see that we only have one rule right now, this Icon Set. What we want to do is select that and choose to edit the rule.

OK now that we're in here we have the option to determine what levels we want these different colors to show up at. So when do we want the green symbol to show up? I would say when the value in the cell is greater than-- I don't want it to be equal to-- but is greater than zero. That means that we have more money than we were expecting.

If the value's bigger than zero we made extra money. I want to see the green. And not percent. We want to change that percent over to a number. So when that value is greater than the number zero we see green.

And now what about yellow? We want to see the yellow ones when the number is zero. So we see yellow, [? what we ?] need is less than or equal to zero and greater than or equal to zero. I know that's goofy. I wish we could just say [? it's ?] equal zero. But it wants to have a range. These things are built that if you wanted to split things into three different categories.

Well for us specifically, right now our middle category is just a single value. So we got to treat it a little goofy. So the only time that value could ever be less than or equal to zero and also greater than or equal to zero is when it is actually zero itself. We change that type to number as well.

And you'll see we don't even have to tell the system what the red one should show up for because it's everything else. It already knows that. So any time that the number is less than zero it will be red. We click OK here. And now we should see these two colors change from green to yellow. After we hit OK.

All right. There we go. Wonderful.

That, folks, is half the battle for this entire sheet. All of those other little sections that we saw underneath expenditures and what not, or budgetary concerns, is doing this exact same thing. Literally this exact same thing just as many times as needed for all the different categories.

I'm going to go ahead and create one of those tables really quick just so we have an example to work with. So let's call this Housing. I like projected, actual, and variance. Whoop. I don't know what happened there. My screen just blipped on me. Projected. Actual. Variance. OK.

Different housing expenditures that we might need to budget for. Mortgage or rent, insurance, electricity, water, sewer, gas, trash, general maintenance, whatever. You all get the idea, right? Let's turn this into a table real quick as well. So, clicking and dragging, highlighting all of this.

We're going to format it as a table. I'm going to choose Medium Three this time, make it orange. Once again, colors can be incredibly powerful. Just by looking at two different colors it can convey a lot of information. Driving down the road you see a red light, you know to stop. See a green light, you know to go. You don't have to necessarily think about it. You just associate that color with that action immediately.

Well we can tap into some of that same power here and know that in this sheet orange means expenses and blue means money coming in. Just going to use [? desk orange ?] this time. Already knows the data, my table has headers, wonderful. So let's type in some information real quick, just so we have something to work with.

OK. [COUGHS] Pardon me.

The numbers in this case really don't matter. We just want to have some numbers here. We once again want to use our formula to compute the variance. Using the power of the table here we type in-- I'll type it up here just to make sure everybody can see it. Make the font larger.

Equal. Forget the little tic sign. By putting that little tic in there first we're telling Excel everything afterwards is text. Don't actually read this as a formula, even though there's an

equal sign here. The tic doesn't show up when we hit Enter because that's just the way Excel [? is. ?]

So equals, bracket. Actual, bracket. Whoops, that should be at actual. At actual. Pardon me. This is going to look goofy. Minus bracket at projected, bracket. I should look-- there we go. Now we can see it. That is our formula here. Because we're taking the value of the actual and subtracting the value of the projected.

Or did I just do it backwards again? I swear. We're going to find out. Let's put this into the variance. And you know what? I did it backwards again. I don't know where my head is. What did we do up here? Why doesn't somebody stop me when I do bad math?

Well the difference up here is correct. We didn't make as much money as we wanted to. Down here in expenses we want our actual to be less than projected. We want to spend less than what we actually did. So in this case this positive 25 here is not a good thing. It means that we spent \$25 more than we were actually expecting.

So in this case flipping the formula back around is the right way to show what we want. Projected minus actual. So let me copy that into our formula. And now it updates properly. So when we see negative 25 we know that we actually spent \$25 more than we budgeted.

I'm going to put the conditional formatting on it again real quick. So highlight that variance column, Conditional Formatting, Icon Sets, choose the ones that you like the most. I like these three traffic lights myself. Then, while we're still highlighted, back to Conditional Formatting, Manage Rules, Select This Rule, edit it, and change the values.

So we want numbers. Green when it is greater than zero, yellow when it is greater than or equal to zero and red when it's actually less than zero. So exact same thing as we did previously. Apply it, hit OK. And we now have our colored stoplights back to where we want it to be.

I'm not seeing any questions in the chat box, is everyone with me so far? I guess the better question is, are there any questions right now? OK. And if anybody thinks I'm going too fast or too slow please also let me know. Not yet, Victoria. All right. OK. Wonderful, wonderful, wonderful.

So as you can see we would just do a number of this table for each time that we want to have a new category. OK. All right. All right. So what other things are actually beneficial to us? Hold on just one second for me. I need to grab my cheat sheet to remind myself. For that I do apologize. If it feels like working.

Taking a look at our template that we used last week just to remind myself if I'm forgetting anything. And sure enough I am. OK. Now while these are incredibly useful tables let's make them just a little bit more useful. I'm going to get rid of that. I'm going to clean this up a little

bit. Zoom out a little so everybody could see better. Enter it in. So I'm just maneuvering around this.

One thing that I forgot to add in here was-- OK, I see a question from Bill. Why use the at sign instead of just the D19 to E19? And actually, you just answered your own question for me. It's absolutely so we could use the cell labels. And it's also because-- because, yeah. We absolutely could just say equals D19 minus E19 and copy it down.

But if the time ever comes to where we want to change the name of the labels then everything is still in there. It's similar, but in this case taking advantage of the columns just helps us keep track of what we're really doing. If I was just to click in this cell and see that I'm minusing actual and projected I can interpret that better than say, D12 minus E12.

If you walk up to somebody and say hey, I'm managing my finances and my formula is D12 minus E12, that's great. But hey, I'm managing my finances. I'm taking my projected value and subtracting my actual value. It can click a little easier. As far as the computer cares it doesn't matter either way. But being able to put some English in there could be a lot easier for just regular folks to understand better.

OK. So back to this table here. One thing that I forgot to add, and I apologize, is some kind of totals. When you're working on some of these larger categories-- in fact, I think this housing one would be a much better example-- it's nice to be able to figure out how much money, in sum, we've actually budgeted here, or spent. Under the wonderful power of the table is that it's got some of that stuff built in very easy for us. I'm going to show you.

I'm going to click somewhere here in this table. It doesn't really matter where. I'm going to click on the housing one here because it's just nicer that way. And you'll see we have a new tab up here in the ribbon. Table Tools Design. What do we have in here? OK.

In here there's a bunch of functions that could be for some neat powerful stuff that we don't need to mess with it today. You can also see this is where you easily change the color scheme of your table if you want to. Kind of cool. But what we really want is here in this Table Style Options. Click the little check box for Total Row. And it's going to add in some totals for us.

It gets even better than that, though. Now that we have this lovely Total Row, if you click in here you'll see we've got some drop down boxes. Ah. Check out all the cool stuff we could add in here without having to actually type a formula ourselves. You want to know the average amount projected? Cool. You want to know what the largest amount was projected? That's fine.

Or a sum adds it up. Sum. Sum. Sum. I could sum it all the way across. And I didn't have to type in a single formula. I love tables. Like I said, they just make life so much better. I can highlight these cells and format them like we did the others.

Turn them over to currency with no decimal places, which I forgot to do on these other ones. I'll do that real quick. Currency with no decimal places. You can even change your currencies, too, if you want. If you're working in a foreign land or dealt with foreign money. And our totals are just there.

OK. Sly, sorry. How did you get the Totals Row? Let me show you. I'm going to come up here to this other table because we need to do it here, too. OK. Sly, click somewhere in the table. You'll see that there is a new tab up here in the ribbon called Table Tools Design.

And then you want to check this box here that says Total Row. Make sure it's checked. It's going to insert that right in there for us. Were you able to find that all right? Perfect. Wonderful.

OK. I'm going to slap in some sums here real quick. And there we go. Powerful stuff. I mean, I make it look easy now. It is easy once you know that it's there. But it's really powerful. And now we've just got a simple little table that you can look at real quick and know, just flat out know, how our budget's doing.

All right we can go a little further, though. All right. I do apologize. My cheat sheet, I admit.

We need our overall-- I'm going to delete this out of here-- we need our overall ins and outs. Because what's the purpose of just doing all these different things separately otherwise? So we have our overall cash flow. So the cash flow tab, or table, excuse me. We still had a projected, still had an actual, and still had a variance. We have total income. Total expense. And we have the total cash flow. But hey, we just learned how we can have Totals [? Row ?] [? in ?] even easier, so let's hold off on that.

We're going to select this entire thing and format it as a table once again. Make sure it has headers so we can get the power of this. One second.

[COUGHS]

Woo. I do apologize, folks. I'm coming off the end of bronchitis right now. So it's probably a good thing I'm not in the same location as you all. I wouldn't want anyone else to get sick. I hope that did hurt anybody's ears.

OK. So back to this. We have our total income. Which where are we going to figure out our total income at? Oh thank you, Victoria, that's very sweet.

Our total income we have already calculated. It's right here. So how do we get it from there to here? Well fortunately, that's pretty easy. We can use a cell reference.

So this particular cell is D16. Column D, Row 16. We could type in D16 or we could just click that cell. Personally, I'm a big fan of just clicking that cell because look at all that cool stuff Excel already typed in there for us. And what's even better about having this in here is if that

projected value-- sorry. That total projected value ever changes in the income it's going to automatically update up here in the cash flow, too. Love that.

Nothing quite like trying to update a piece of data in five different places and forgetting one and screwing things up. So we hit Enter there-- whoop. Hello, we don't need total expense there. Delete that out. And you'll see we've got our \$52.70. And let me show you.

If I now project my lottery winnings to be \$200 instead of \$250 that's going to change my Totals Projected. So it should change my Projected Totals Income, too. And it does. Look at everything that just updated. It's where the power, the power is here.

So we could do the same for our actual income. We've already configured that, as well. So type in equals and click on that cell. Press Enter. And then delete it out of the expenses. Excel's trying to be helpful but it's not what we actually need right now.

For variance, we could reference it down here or we could type in our table formula again. I like our table formula. So Totals Income is going to be, ahh. I don't know how well you can see this. Unfortunately I can't really blow it up. I do apologize for that. I can't make this any bigger. But when you type into that cell equals and the square bracket Excel will tell you all of the different columns that you could use in this formula. So you don't even have to type those out.

Since this is income a positive variance means that we had more money than then we-- sorry. A green light, good variance, would mean that we actually got more money than we projected. So we want actual minus projected in this case. If the actual minus the projected is positive we got more money than we assumed. In this case we didn't. Bummer.

All right. Well we're not doing anything too revolutionary there. But our Totals Expenses we can start getting into more complex formulas. All right. Well right now we only have one set of expenses. So it's just the exact same as what we did. That's not super useful. So let's make another set of expenses.

I'm going to copy this table. Gone too far, sorry. Paste it in here. I'm going to change housing to transportation. And just type in some stuff real quick. This isn't going to look the prettiest but I apologize for that. Insurance. Gas. I don't want sewer or gas or trash so I'm going to delete those rows.

OK. \$250, \$200, \$50. I wish it was \$25 for gas. That would be a good day. OK. We actually spent \$275, \$200. I want to pay off my car early, after all. Insurance is \$50. I only spent \$75 on gas because it went down to under \$2 a gallon. We can hope. \$40 on maintenance and somebody broke my windshield, so \$250.

OK. And just that fast, with the joys of copy and paste, we're able to make an entire other table of expenses here. This one's transportation. I love that. All the formulas just update on their own.

That's what comes to good planning, folks. Through this good planning we're able to do little cheats like this and everything works out nicely.

So just do simple math. How do we figure out what our total expense projected is? Well we need to add up our total projected expenses. Our formula here is equals sum s-u-m. Sum means add and you add a bunch of things together. Left parenthesis and then we can click on the different cells that we want to add up.

So in this case our total expense projected here plus total expense projected here. Since we only have the two right now. Close it all with the right parenthesis and hit Enter. And we've got that value there now.

Do the exact same thing for the actual equals sum, left parentheses. This total plus or you could use a comma for that, [? Mary. ?] This total. Right parenthesis, hit Enter. Now we have that. Why does it do that? This is Excel trying to be helpful again. And in this case it's not very helpful.

Stop automatically creating calculated columns. That seems good. Silly thing. All right. So let's go back and fix this formula. It's equal to this value. Not minus, it's equal to the value. All right. So double checking. Cannot always assume that technology does it right.

Projected of \$52.20. Actual \$50.50. Variance of \$1.70. It says a projected of \$20.35 13 and 6 is 19, yep. \$20.35 here. And let's see. That would be \$22.02.

OK, cool. All right. Our formulas are now OK. Throw in a Totals Rows. Make them sums. What, what? It shows the minimum, we don't want that. We wan the sum.

We've now created our basic summary table. By doing this we only have to look in one place to know right off the bat how we're doing overall. You could just go through and look through all the different income sources and all the different expenses.

But I don't do all that kind of math in my head. I don't know about you all. But by creating this one table here we can summarize everything. So we look at one place. And it looks like, with my fake numbers, we did a pretty darn good job in budgeting.

Or did we? There's the question. We don't want this to be a sum. We really don't. Adding projected income and expenses. That's not good. What we want is the difference.

So in this case, actually using the Totals Row might not be the wisest choice. I'm going to delete out all of that. And say equals the total income projected minus the total expense projected, then hit enter. I'll then do the same in the actuals as well. Not it that cell. Control Z is a good friend. It's the undo.

So in this one we want equals the actual total income minus the actual total expense. So we projected to have a net increase of \$31.85. We actually had a net increase of \$28.48, which

means that we are actually lower than the we want to be. This should be equals the actual minus the projected. And we are \$337.00 worse off than we were expecting.

Which means that-- mm-hmm. And that formula's backwards. Sometimes we've got to play around a little bit. This is how we figure it out. And this is why you can't just assume that you're right. You have to use your logic and your reasoning to make sure that things are correct.

Why am I adding income and expense? Oh, sorry Sly. I just saw that message. You are right. I shouldn't have been adding that. Thank you for catching that and making sure I'm on the right page here. So no, we don't want to add income and expense. We need to find the difference between the two. So really appreciate you pointing that out and I'm sorry I didn't fix that until just now.

All right. We are running almost out of time and I do apologize for that. A lot of that is because of our technical difficulties earlier. So I don't have the time to make this all fancy and nice and neat as we want. But I would like to show how we can start to put in the basic chart.

So I am just highlighting some rows here, right clicking and hitting insert just to make some space. What we want to do is add in a chart. So first things first, I really want the chart over this overall. I don't really care about the individual things. It's the big picture that we need.

So I'm going to select not the Totals Row, we don't really need that. Heck, we might not even need the variance. Let's just start with this right now. Projected and Actual, Total Income, Total Expense. You know what? Actually, let's [INAUDIBLE] Why not?

So I highlight everything but the Totals Row. Up here in the bar I go to Insert. The Insert tab of the ribbon. And there's a nice section here in the middle for charts. You can have it recommended a chart, what it thinks is going to be most useful based on the data it sees. That's cool. Let's start there. See what it thinks.

OK. When we pull this up it gives us its basic recommendations as a good way to show this. Or you can click on All Charts and pick your own. And lord knows there are a lot of different types of charts. You want a pie chart? You've got a pie chart. I don't want a pie chart.

Personally I think that this clustered column is actually a really good recommendation by Excel. That is a nice way to show the data. So I'm going to choose it and hit OK. It's enormous, but it's our chart. Let's do something about this.

By clicking in this chart we're able to drag it around, move it around. We can move our cursor to the corners and resize it, just like most Microsoft products. We can do all of this stuff. I'm going to make it look a little nicer. That's not useful. We can do some other formatting things, too. If you're a Broncos fan this might be a great color combination for you. If you're not-- and I'm not-- then this is not a good way to go.

While this chart is highlighted we get some other buttons over here to the right hand side. The first are chart elements. Do you want to see these different things? I don't need a title for this chart. Let's get it out of there. Do we want the grid lines? Nah.

The legend seems kind of useful, though. Where do we want the legend to be? So if you see when I hover over legend there's this little right arrow to the right of it. I click on that, it gives us the options of where we want to move that. I want it on the right hand side. Well, that kind of squishes this. So let's expand it a bit, make it look a little nicer.

Second button here is style. So even after you make the chart you can change it up a bit. Want it to look like that, be more opaque. Have this nice, [? fancy air ?] to it with the numbers in it. We can change it up.

This final one here allows us to specify what the data itself actually is. So maybe we don't want to see Total Income after all. Well, we can take it out. We don't want to see the Variance, after all. We can take that out.

So when you decide, you don't have to rebuild the entire chart. You can just get it out of there. Unfortunately, the variance is probably the most important part in here. And it's kind of hard to see. Well that's just, unfortunately, the way our data turned out right now. We can change the names. Not necessary in this case.

When you click on the chart itself you'll see we get some new ribbon tabs up here at the top. This is just like the tables where you can start to manipulate it. You can change your color scheme. Blue Variance. Random colors. Switch the row and column. So now we can see all the incomes grouped together, all the expenses grouped together. That might be a better way to see it. And all kinds of other fun things like that.

All right. So armed with this knowledge, now, I know that you all could go in. You can make all the different tables that you would need for your expenses. We've already got our incomes. You now know how to make this cash flows. And based off this cash flows you could make this chart.

So with a little bit of finagling, a little bit of moving stuff around, finding your fonts, you [? could ?] recreate that monthly budget worksheet. Exactly to the same way as the template I sent out last week. You now have the knowledge to do something this cool.

Are there any questions? Anything that I need to go back over? Anything else I can share with you tonight?

Wonderful, OK. Sorry, reading your comments right now. You're welcome, Victoria. I'm very glad, Rachel. And Wendy, I'm really glad that you're able to increase your knowledge. Enhance your stuff. Joseph, you're very welcome.

OK. Well, if there are no other questions I hope this was a value to you all. I really hope that this is something that you could expand upon. Maybe not budgets, but find ways to turn these types of tricks into becoming useful for you in your lives. Thank you all, and I hope you have a great evening. It's been a pleasure.

ALEX MURPHY: All right, everyone. I just want to say thank you so much for participating in tonight's event. And thank you to Stoney for taking the time out to explain in such great detail how to create these spreadsheets. I hope that everyone learned something. And if you have any questions please feel free to email us. And we will be happy to pass that along to Stoney and get your questions answered.

I just submitted a link into the chat box. It's a link to our global connection survey. And if you could just take a moment just to fill that out. It's only five questions. It'll take you one minute and it really helps us to develop our future programming and get some great feedback from students. What did you enjoy? What do you think we could improve on? And things like that.

I'd also like to encourage everyone to check out our homepage, which I just put into the chat box. We've got some really wonderful upcoming events happening next week. We've got an event with Merry Cellars Winery where they'll be giving away \$100 gift certificate. We also have an International Woman's Day speaker from Botswana. And we have a virtual career fair happening on March 5th.

So take a moment. Check out our upcoming events. Make sure you register for as many as you'd like. They're all free. So once again, thank you to Stoney. Thank you to everyone who came. And we hope you enjoyed the night. Have a great evening.