

E17: Excel Supercharged with AI Insights

Presenters: Marilyn Adolph & Laura Terbrack, Wayne RESA

Thursday, 8:20 – 9:20

Exercise File → <https://tinyurl.com/AIXL2026>

PowerPoint File Link → <https://tinyurl.com/AIPWPT26>



Presentation Link

Today's Agenda

- 5 Scenarios

- Your Personal Budget – Am I spending too much money?
 - The Mystery Worksheet – I don't remember creating this!
 - How are we spending our money in the Science Department?
 - I've Inherited a Worksheet I Don't Understand, Now What?
 - Negotiated Salary Increases
 - Own your own activity – Forecasting
- Tips for Using AI (Copilot) in Excel and Basic Terminology
 - FAQ



Today's Goal

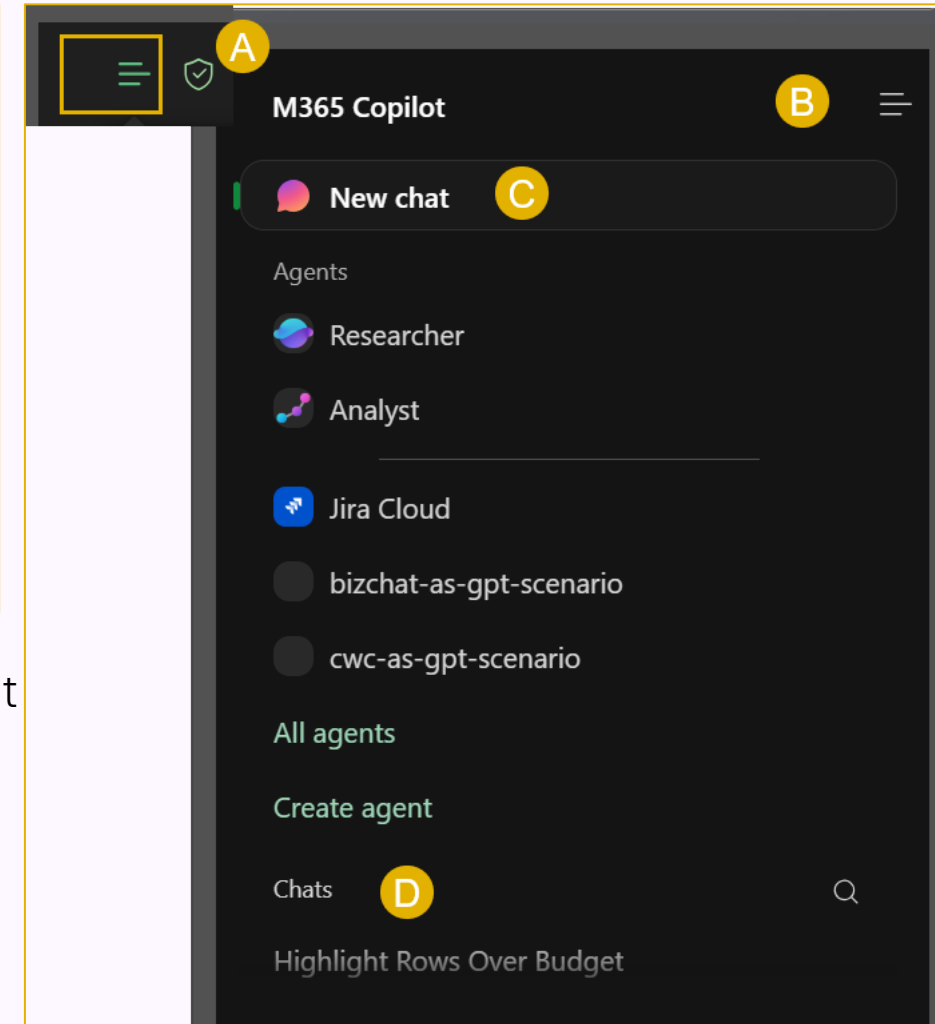
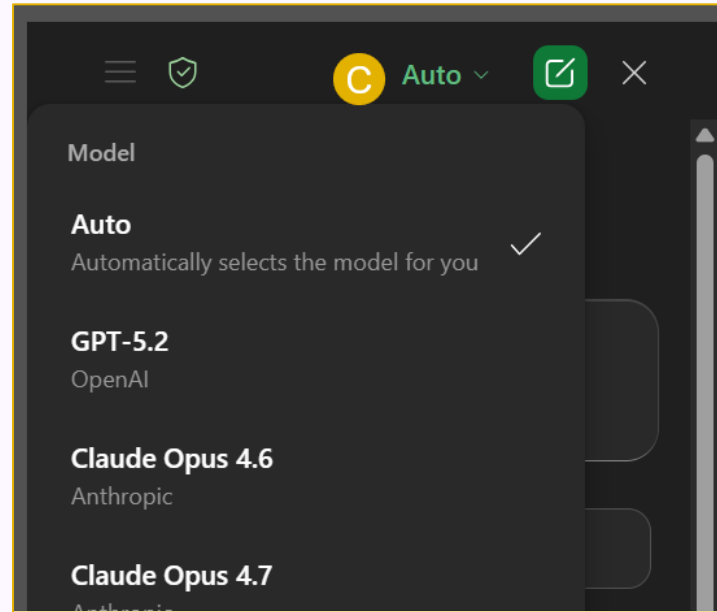
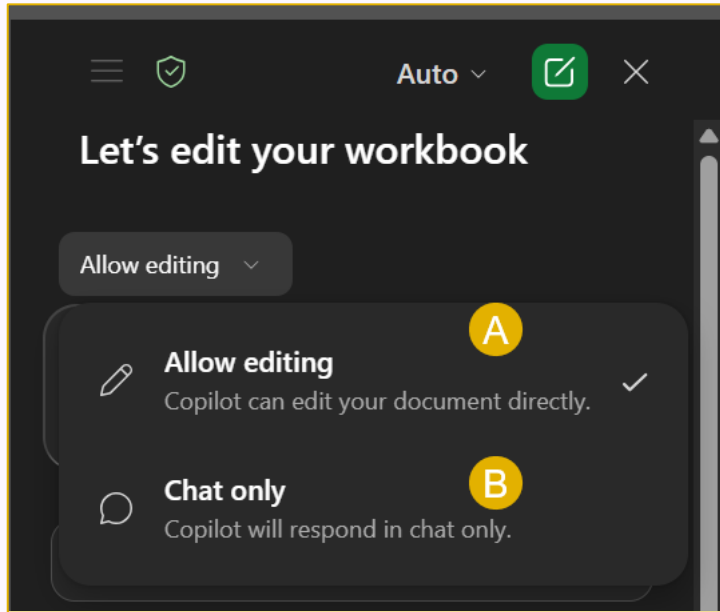


Have fun turning your
spreadsheets from a “Mystery”
into a “Masterpiece”.



I asked ChatGPT to make my Excel sheet 'user-friendly.' It deleted the file and sent me a link to a coloring book.

Before We Get Started



A – Gives Copilot permission to update your worksheet
B – Copilot will provide instructions but will not update your worksheet

C – AI models being used by Copilot

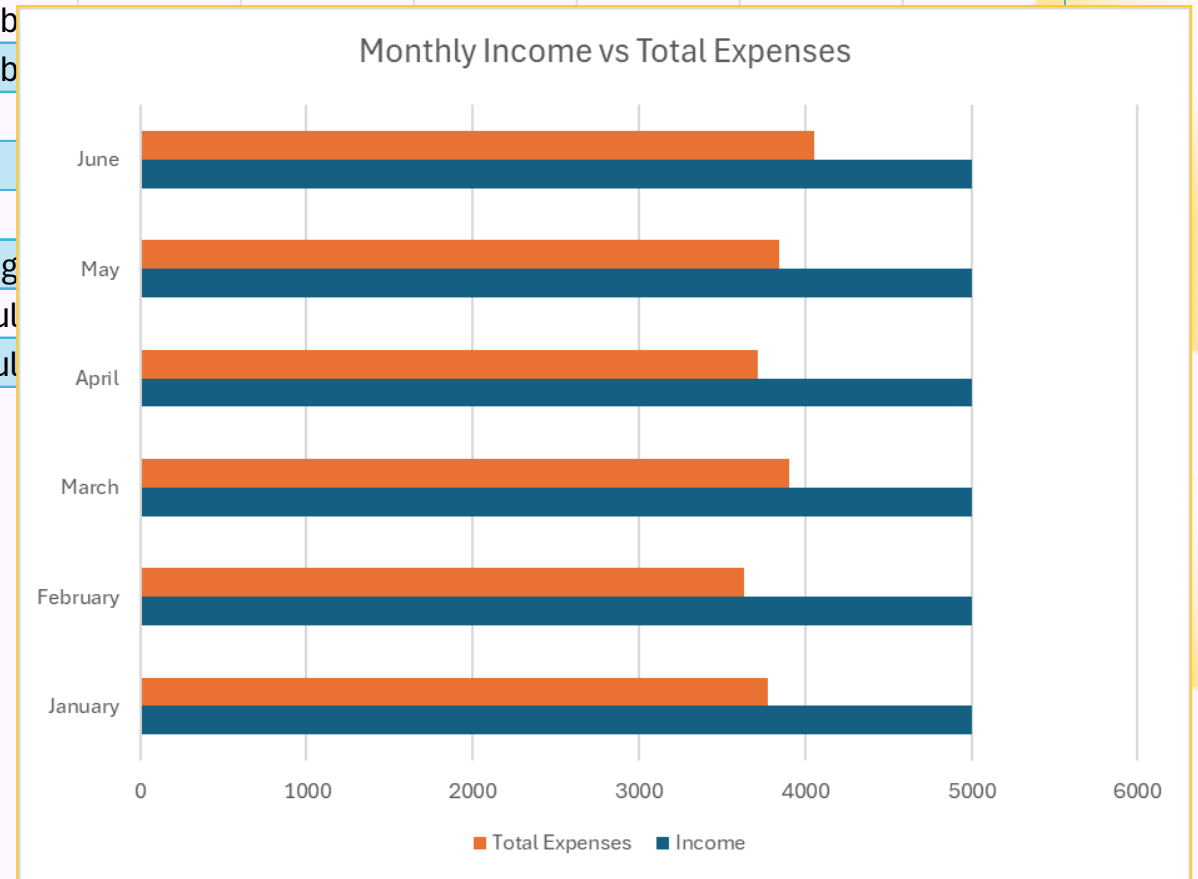
A – Navigation panel
B – Close navigation panel
C – Start new chat
D – Chat history/Search chat history

Scenario 1 Takeaways

Personal Budget

- **Conversational Math:** Skip the Excel syntax (A1 + B1), simply tell Copilot in plain English what you want. For example, “I want to calculate Net Income” or “I want to total all my expenses.”
- **Visualization:** Use Copilot to instantly create charts and graphs

Category	Type	January	February	March	April	May	June
Monthly Income	Income	5000	5000	5000	5000	5000	5000
Rent	Fixed	1800	1800	1800	1800	1800	1800
Car Payment	Fixed	450	450	450	450	450	450
Car Insurance	Fixed	120	120	120	120	120	120
Groceries	Fixed	600	600	600	600	600	600
Gas	Variable	145	130	165	140	155	150
Electricity	Variable	95	110	85	90	105	120
Entertainment	Variable						
Dining Out	Variable						
Gym Membership	Fixed						
Internet/Phone	Fixed						
Subscriptions	Fixed						
Boat Savings	Savings						
Total Expenses	Calculated						
Net Income	Calculated						





I told Copilot I wanted to be a billionaire using Excel. It just typed =SUM(DREAMS) and then gave me a #VALUE! error.

Scenario 2 Takeaways

Mystery Worksheet

- **Instant Understanding:** Use Copilot to familiarize yourself with a worksheet by asking it to summarize its purpose. *Verify the information is correct!
- **Editing:** Use Copilot to rename vague column and row labels based on what is in the worksheet
- **Decoder:** Ask Copilot to explain rules behind the data or formulas so you can work with confidence

ID_Ref	Area_Code	Data_Pt_A	Data_Pt_B	Status_Flag
101	Fixed	1800	1800	OK
102	Fixed	BEFORE 450	450	OK
103	Variable	145	210	High
104	Fixed	600	600	OK
105	Variable	210	350	Warning
106	Fixed	120	120	OK
107	Variable	95	150	OK

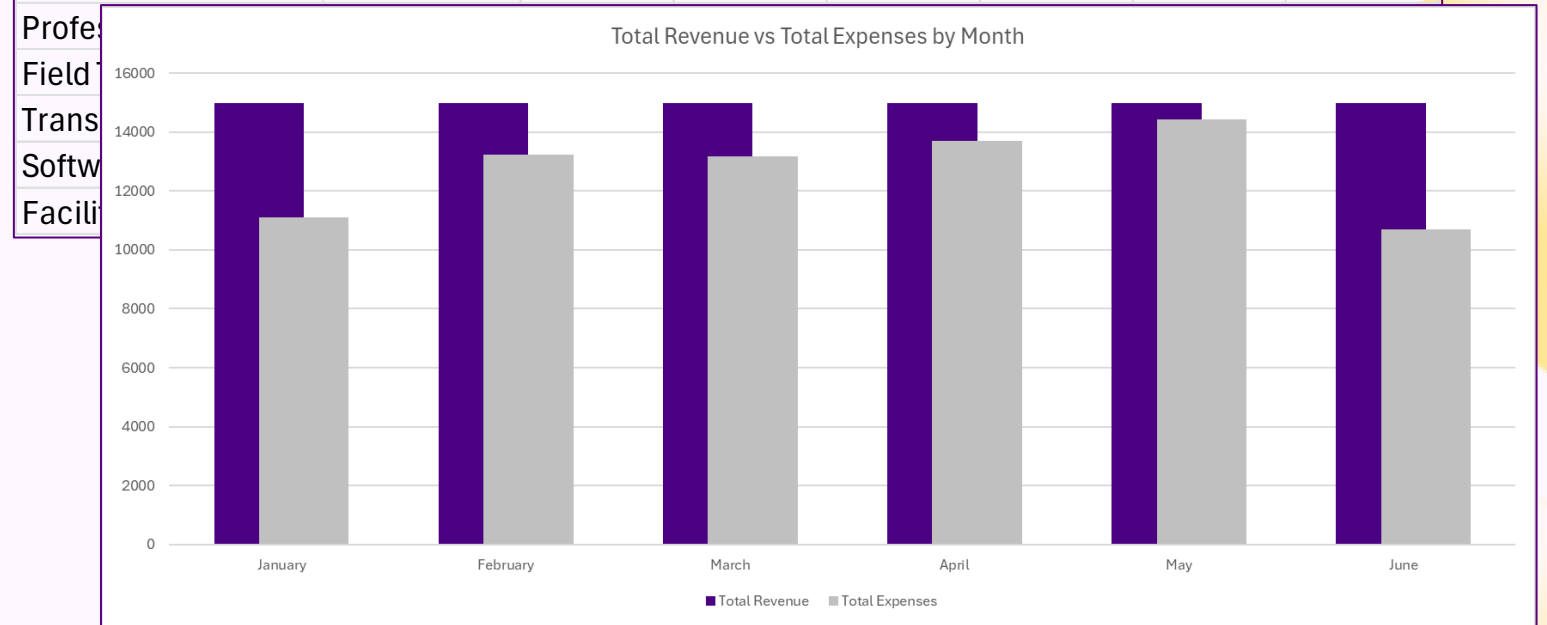
ID_Ref	Expense_Type	Baseline_Amount	Current_Amount	Status_Flag
101	Fixed	1800	1800	OK
102	Fixed	450	450	OK
103	Variable	AFTER 145	210	High
104	Fixed	600	600	OK
105	Variable	210	350	Warning
106	Fixed	120	120	OK
107	Variable	95	150	OK

Scenario 3 Takeaways

Science Department Budget

- **Personal Assistant:** Quickly identify unspent funds when deadlines are tight
- **What-If Power:** Use Copilot to model moving funds before committing to actual budget changes
- **Communication:** Instantly draft a professional summary providing a breakdown of the budget and how dollars are being spent

Category	Type	January	February	March	April	May	June
Total Allocation	Revenue	15,000	15,000	15,000	15,000	15,000	15,000
Teacher Salaries	Personnel	9,500	9,500	9,500	9,500	9,500	9,500
Substitute Teachers	Personnel	400	650	300	1,200	500	200
Textbooks & Media	Instructional	0	1,200	0	0	450	0
Lab Supplies	Instructional	300	250	400	150	100	50
Office Supplies	Admin	150	100	120	110	90	200



EXECUTIVE SUMMARY: Personnel is the largest spending category at \$60,250 (79% of total expenditures), driven primarily by Teacher Salaries (\$57,000) and Substitute Teachers (\$3,250). A significant spike in variable costs occurred in April when Substitute Teacher expenses reached \$1,200—more than double the typical \$500 monthly budget—with February also exceeding budget at \$650. The Science Department is currently UNDER budget, having spent \$76,370 of the \$90,000 six-month allocation, leaving a surplus of \$13,630.

Excel and Copilot are the perfect couple. One ignores your logic, and the other just hallucinates the answer.



Scenario 4 Takeaways

The Mystery Grant

- **Translation Tool:** Use Copilot to “decode” vague headers and complex logic
- **Logic Explainer:** If you don’t understand a formula, ask Copilot to explain it in plain English to avoid inheriting someone else’s errors
- **Auditor:** Quickly identify over-spent buckets to ensure grant requirements are being met

Ref_ID	Fund_Code	Allocated_Budget	Amount_Spent	Delta_Check
G-201	Tech-Hardware	12000	12000	0
G-202	Teacher-Stipend	5000	5250	-250
G-203	Student-Supplies	BEFORE 3500	1400	2100
G-204	Travel-PD	2500	2800	-300
G-205	AfterSchool-Tutoring	8000	4000	4000
G-206	Parent-Engagement	1500	1500	0

Ref_ID	Fund_Code	Allocated_Budget	Amount_Spent	Delta_Check
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G-205	AfterSchool-Tutoring	AFTER 8000	4000	4000
G-206	Parent-Engagement	1500	1500	0

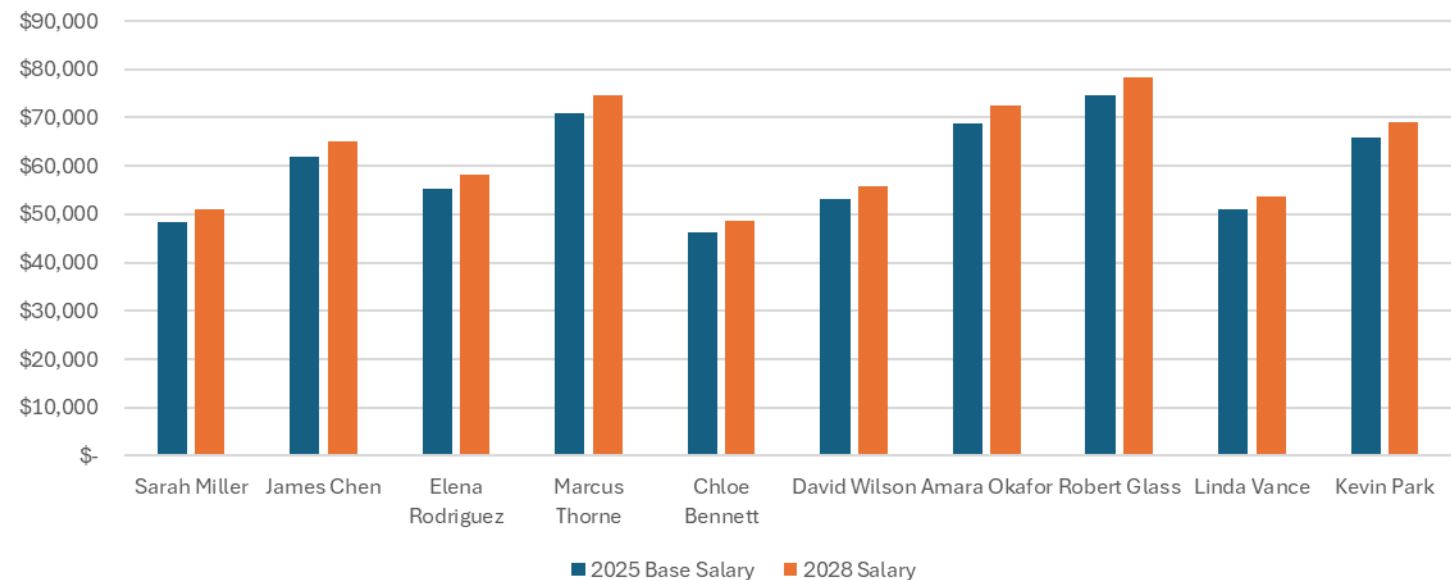
Scenario 5 Takeaways

HR/Union (Salary Projections)

- **Mathematician:** Let Copilot handle multi-step percentage increases to eliminate mathematical errors
- **Fiscal Impact at a Glance:** Instantly see the total cost to the district over a 3-year period rather than calculating teacher-by-teacher
- **Formatting Speed:** Use natural language to clean up data (e.g., “round” to the nearest dollar and format as “currency”)

Teacher Name	Dept/Grade	2025 Base Salary	2026 Salary	2027 Salary	2028 Salary	Cumulative Increase
Sarah Miller	ELA - Grade 6	\$ 48,500	\$ 49,228	\$ 49,966	\$ 50,965	\$ 2,465
James Chen	Math - Grade 10	\$ 62,000	\$ 62,930	\$ 63,874	\$ 65,151	\$ 3,151
Elena Rodriguez	Science - Grade 9	\$ 55,400	\$ 56,231	\$ 57,074	\$ 58,215	\$ 2,815
Marcus Thorne	History - Grade 11	\$ 71,000	\$ 72,065	\$ 73,146	\$ 74,609	\$ 3,609
Chloe Bennett	Art - K-5	\$ 46,200	\$ 46,893	\$ 47,596	\$ 48,548	\$ 2,348
David Wilson	PE - Grade 7	\$ 53,100	\$ 53,897	\$ 54,705	\$ 55,799	\$ 2,699
Amara Okafor	Music - High School	\$ 68,900	\$ 69,934	\$ 70,983	\$ 72,403	\$ 3,503
Robert Glass	Special Ed	\$ 74,500	\$ 75,618	\$ 76,752	\$ 78,287	\$ 3,787
Linda Vance	ELA - Grade 8	\$ 51,000	\$ 51,765	\$ 52,541	\$ 53,592	\$ 2,592
Kevin Park	Math - Grade 12	\$ 65,800	\$ 66,787	\$ 67,789	\$ 69,145	\$ 3,345
Total Salary Difference (2025 vs 2028)		\$ 596,400			\$ 626,714	
Additional District Cost by 2028					\$ 30,314	
Percentage Increase					5.08%	

2025 Base Salary vs. 2028 Projected Salary



What's the difference between Copilot and an Excel formula? Copilot pretends it knows what it's doing; the formula just screams **#N/A** in your face.



On Your Own

Predict Future Building Capacity Issues

- **Automated Red Flags:** Use Conditional Formatting via AI to visually highlight schools that have reached their breaking point
- **Identifying Speed:** Don't just look at totals, let Copilot find the fastest-growing schools to help you prioritize future construction or staffing
- **Predictive Planning:** Project a 5% growth across all buildings to see which “safe” schools will become “crowded” schools next year

School Name	2024 Enrollment	2025 Enrollment	2026 Enrollment	Max Capacity	% Growth (2024-2026)
Lincoln Elementary	410	425	440	450	7.3%
Washington Primary	320	315	310	400	-3.1%
Jefferson Heights	550	575	610	600	10.9%
Roosevelt Academy	480	490	505	525	5.2%
Kennedy Global	290	310	340	350	17.2%

School Name	2027 Projected Enrollment	Max Capacity	Over Capacity?
Lincoln Elementary	462	450	YES
Washington Primary	326	400	NO
Jefferson Heights	641	600	YES
Roosevelt Academy	530	525	YES
Kennedy Global	357	350	YES

Terminology

Prompt & Prompt Engineering

The specific instruction or question you give to the AI. The better the prompt, the better the output.

The "art" of refining your instructions to get exactly the result you want.

LLM (Large Language Model)

The engine behind Copilot. It has "read" billions of pages of text to learn how to predict the next word in a sentence or the next formula in a table.

Hallucination & Natural Language

When an AI confidently provides information that is incorrect or fabricated. This is why the "Verify, then Apply" rule is so important.

Communicating with a computer using normal human speech (English) instead of coding or complex math syntax.

Iterative Prompting & Structured Data

The process of "talking back" to the AI to fix or improve a result. (e.g., "That's too long, make it shorter.")

Information organized into a clear format (like an Excel Table) that an AI can easily map and understand.

Tips

1. Don't share confidential data in the free AI models. Anonymize your data
2. Be specific with prompts. Provide Context, Purpose and Constraints
3. Use “quotes” if Copilot is having trouble recognizing column and row labels
4. Break tasks up so Copilot doesn't get confused
5. Always, Always, Always check AI results
6. Ask for logic if you are unsure of how Copilot calculated something
7. Copilot can see data hidden in columns and rows. If you don't use, delete it
8. If Copilot has a hard time defining your worksheet area, format the area as a Table (Ctrl +T)
9. Copilot doesn't like merged cells

FAQ

Is my data private and secure? When using Copilot for Microsoft 365 through your district's enterprise account, your data stays within the district's secure "tenant." It is not used to train the public AI models (like the free version of ChatGPT)

What if Copilot's math is wrong? Always use the **"Verify, then Apply"** rule. Copilot provides a preview of every calculation it suggests. If it looks off, you can ask it to *"Explain your logic"* or simply click "Undo."

Why is my Copilot button greyed out? **This usually happens if the file isn't in the cloud. Ensure your file is saved to OneDrive or SharePoint and that AutoSave is toggled ON in the top-left corner.**

Can Copilot work with my old .xls files? No. Copilot requires the modern .xlsx format. If you have an old file, simply "Save As" a modern Excel Workbook to enable AI features.

Can it handle merged cells? AI (and Excel in general) struggles with merged cells. For the best results, keep your data in a clean, tabular format with a single row of unique headers.

What if I don't have access to Copilot through my organization? While this session focused on the built-in Excel Copilot, the logic of prompting works in other AI tools like ChatGPT, Gemini or the free version of Microsoft Copilot (Web). **You can create the same prompts we learned today or prompts you create directly into the AI Tool of your choice, and they copy back the results in your worksheet.**

Copilot is like a pivot table. It's incredibly powerful, slightly intimidating, and 90% of the time, people are just clicking buttons and hoping for the best.

