## Using Excel to Troubleshoot EMIS Data



#### Overview

- Basic Excel techniques can be used to analyze EMIS data from Student Information Systems (SISs), from the Data Collector, and on ODE EMIS reports
- This session will demonstrate Excel functions and practical applications that can be helpful in all phases of the EMIS data review process

#### Outline

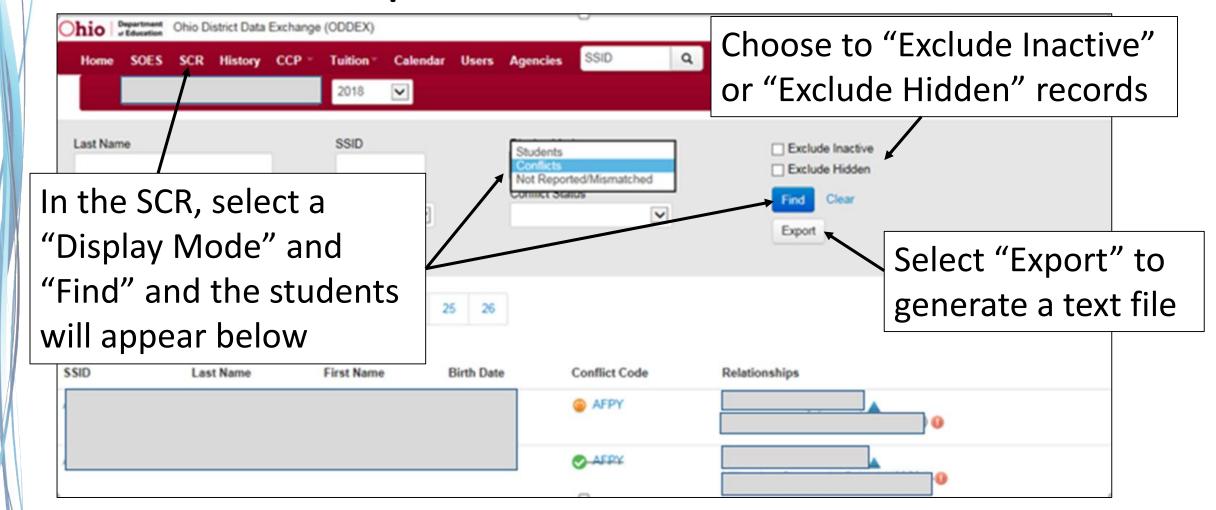
- ODDEX Student Cross Reference (SCR) Export
- Calendar and Student Data Comparison
- Staff Data Formatting to Share with District Staff
- FTE Detail Report Subtotaling
- FTE Detail Report PivotTable



## **ODDEX SCR Export**



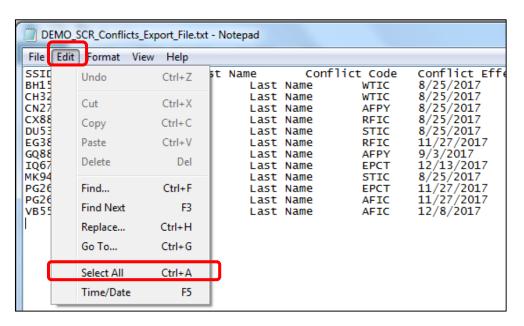
## ODDEX SCR Export Text File

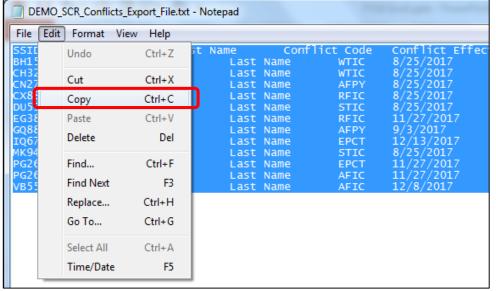


#### SCR Text File

#### Open the scr\_export.txt file from ODDEX

- Select "Edit" then "Select All" or Press CTRL and A
- Once data is selected, go to "Edit" and "Copy" or Press CTRL and C







## Copy Data Into Excel

Open Excel, then INSERT PAGE LAYOUT DATA place cursor into cell A1 Font Alignment Calibri - 11 X Cut Select "Paste" or right En Copy Paste Options: click, then "Paste" or CTRL and V Paste Special... Insert... Delete... Clear Contents 11 Quick Analysis 12 13 Filter 14 Sort

## Prepare the SCR Export Report

- Select Header Row and Wrap Text
- Freeze Top Row
- Justify column width
- Apply Filters



### Review SCR Conflict Data

Data on the report is separated by LEA1 and LEA2 the same as clicking on the Conflict Code and viewing the Conflict Details in SCR

Students can have more than one line when they have multiple errors

							. ^ _						
	М	N	$\dagger$ LEA1 $\vdash$	Р	Q	R	S		A2	Т	U	V	W
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		How		LEA1		Reportin					LEA2	LEA2	LEA2
		Received		Sent		g LEA2					Percent	Admissio	Admissio
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2	LEA1 Admitted From	*	LEA1 How Received		LEA1 Educating or Resident	40404	Reporting LEA2	Name					
3	LEA1 Admitted From	*	LEA1 How Received		LEA1 Educating or Resident	50505	Reporting LEA2	Name					
4	LEA1 Admitted From	*	LEA1 How Received		LEA1 Educating or Resident	30303	Reporting LEA2	Name					
5	LEA1 Admitted From	С	LEA1 How Received		LEA1 Educating or Resident	60606	Reporting LEA2	Name					
6	LEA1 Admitted From	*	LEA1 How Received	OE	LEA1 Educating or Resident	40404	Reporting LEA2	Name					
7	LEA1 Admitted From	С	LEA1 How Received		LEA1 Educating or Resident	50505	Reporting LEA2	Name					



#### **Quick Check**

Exporting data from SCR in ODDEX and copying the data into Excel provides a quick way to sort and filter as the data is reviewed.

Spreadsheets of data along with district notes added to the spreadsheet can be easily saved for future reference.

- Are you regularly submitting updated SCR data to EMIS?
- How often do you review SCR data in ODDEX?
- Are you using Excel as an additional tool to review SCR data?

# Calendar and Student Data Comparison

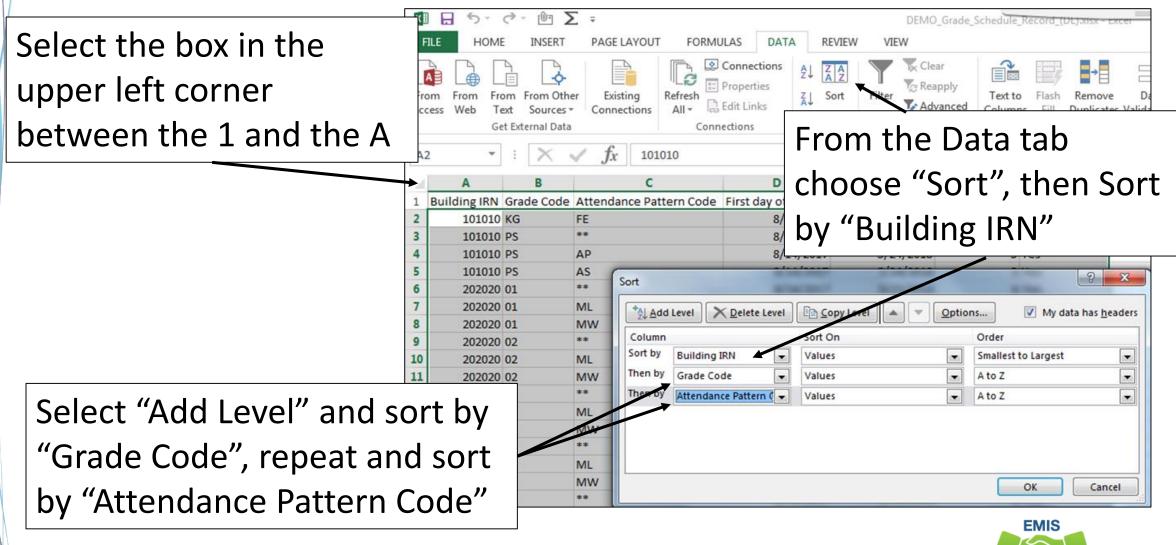
#### Calendar Data and Student Data

- Calendar Collections contain calendar data and no student data
- Student Collections contain student Building IRNs, State Equivalent Grade Levels, and Attendance Patterns
- The data does not meet until the FTE Reports are generated
- Using Excel, the data can be compared to ensure that calendar data and student data align

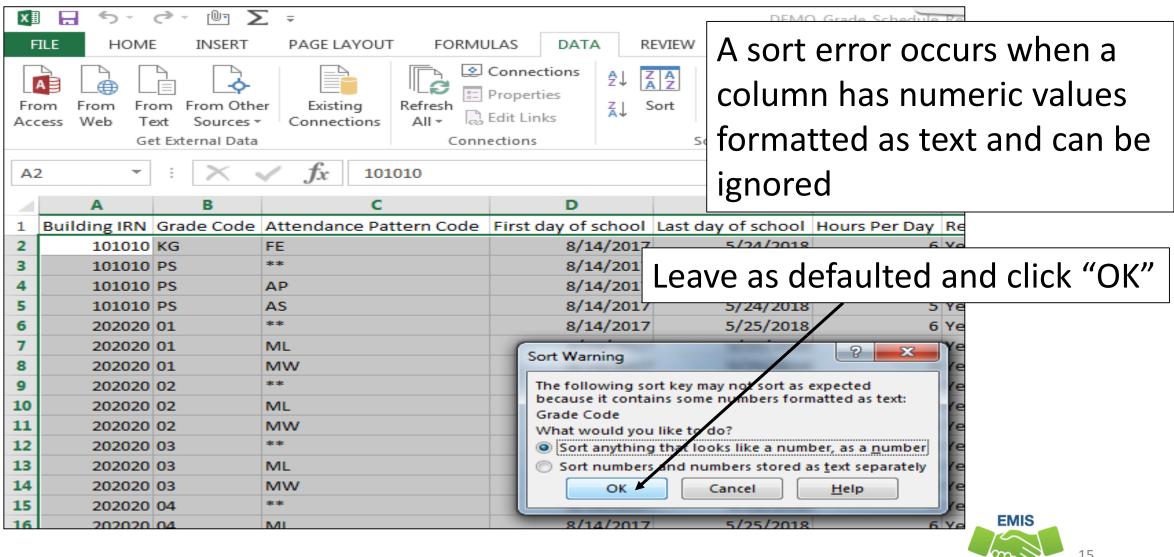
#### **Data Collector Files**

- From the most recent Calendar Collection view the Submission/Preview Files
  - Open the Grade\_Schedule\_Record\_(DL) file
- From the most recent Student Collection
  - Open the Student\_Attributes\_Effective\_Date\_Record\_(FD) file
- Prepare both files for review

### Sort the DL File

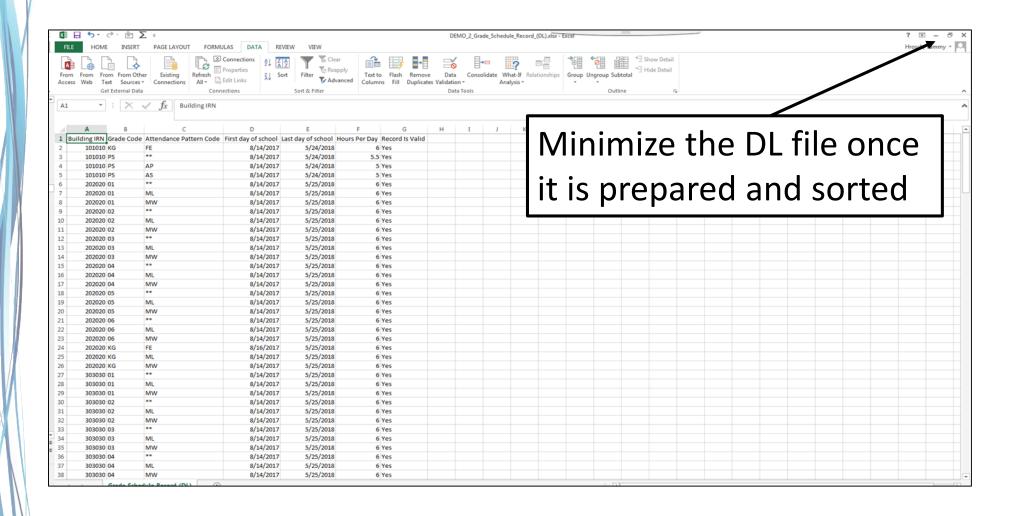


#### Sort Error

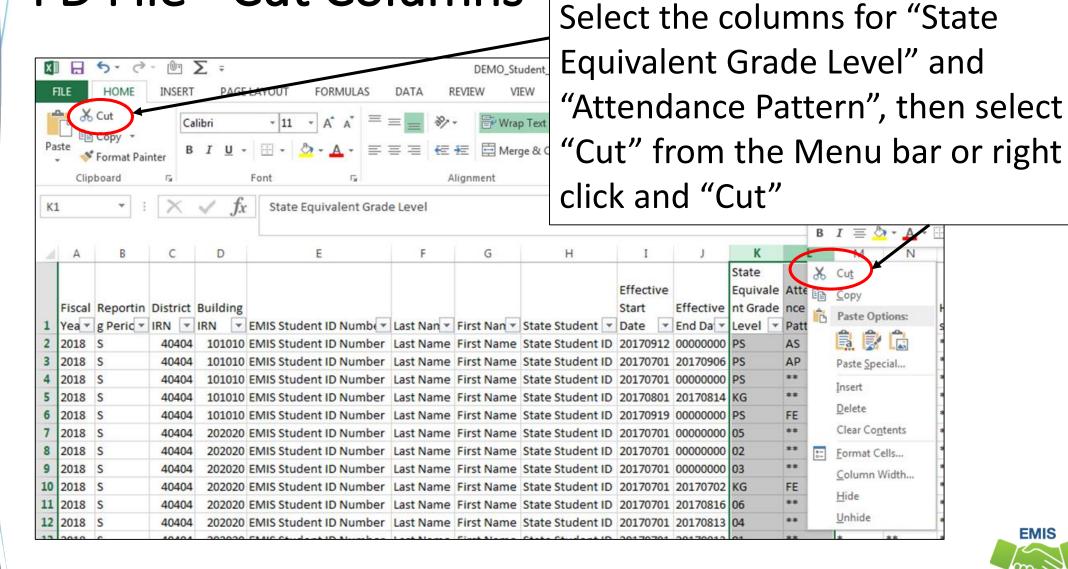


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## Minimize DL File

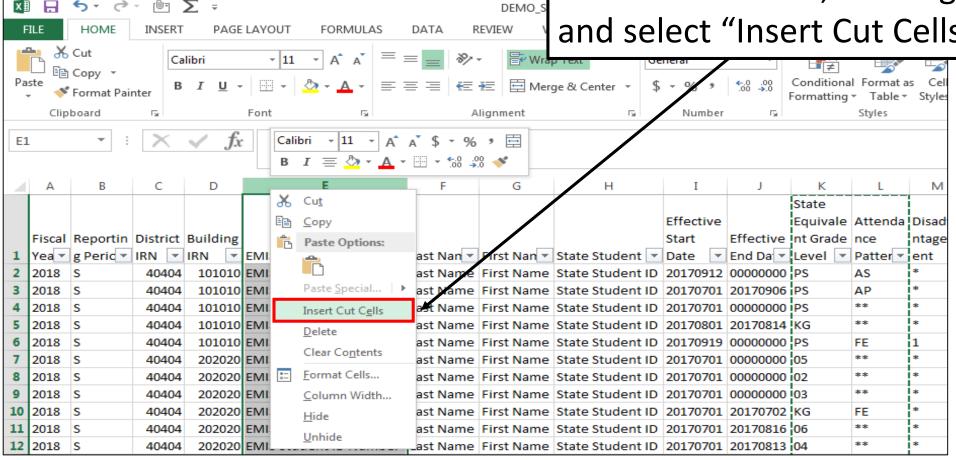


## FD File - Cut Columns

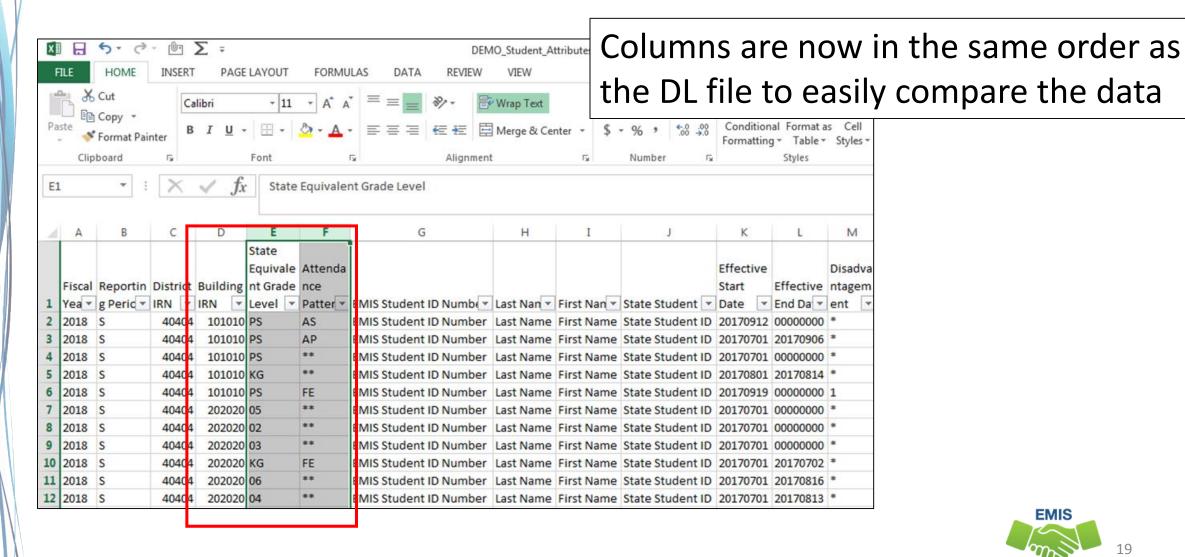


## **Insert Cut Cells**

Select the "EMIS Student ID Number" column, then right click and select "Insert Cut Cells"

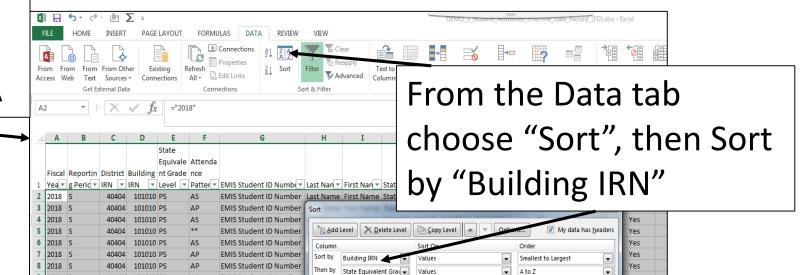


## Columns Side by Side



### Sort the FD File

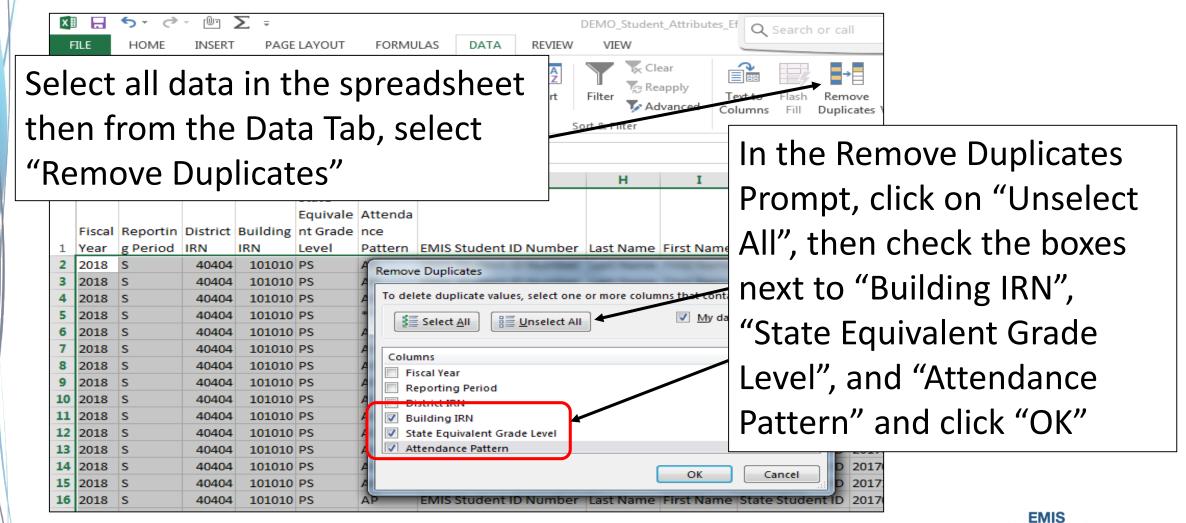
Select the box in the upper left corner between the 1 and the A



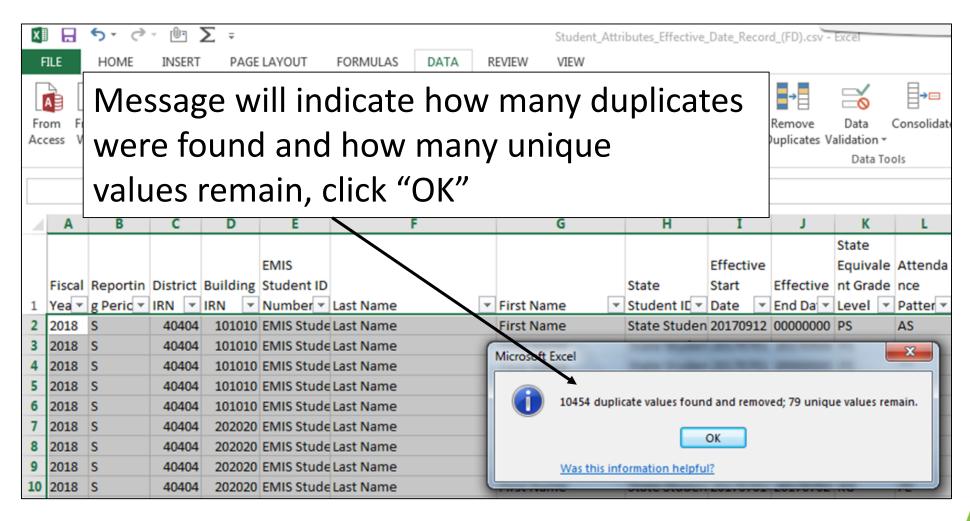
Select "Add Level" and sort by "Grade Code", repeat and sort by "Attendance Pattern Code"

101010 PS

## Remove Duplicates in FD File



## **Duplicates Removed**

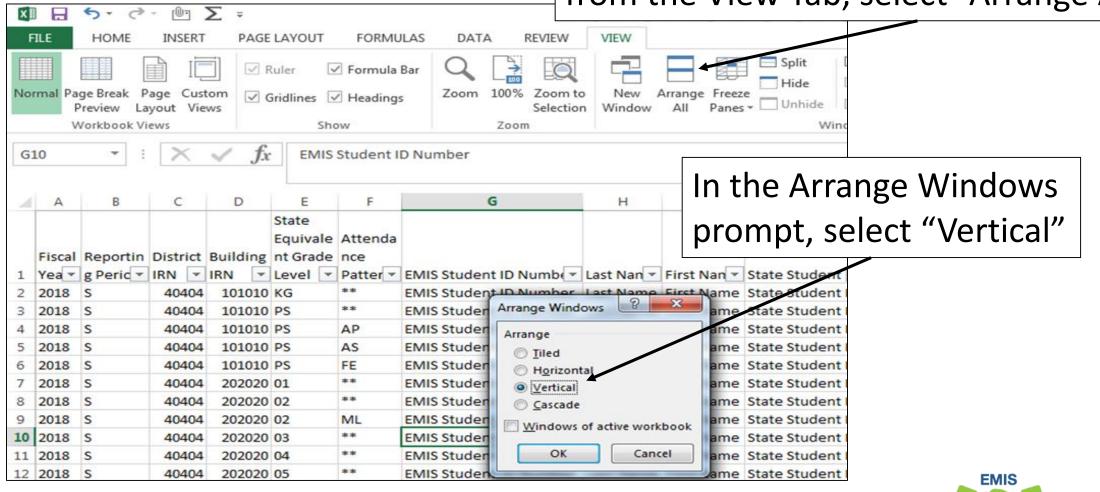


## Compare the Data

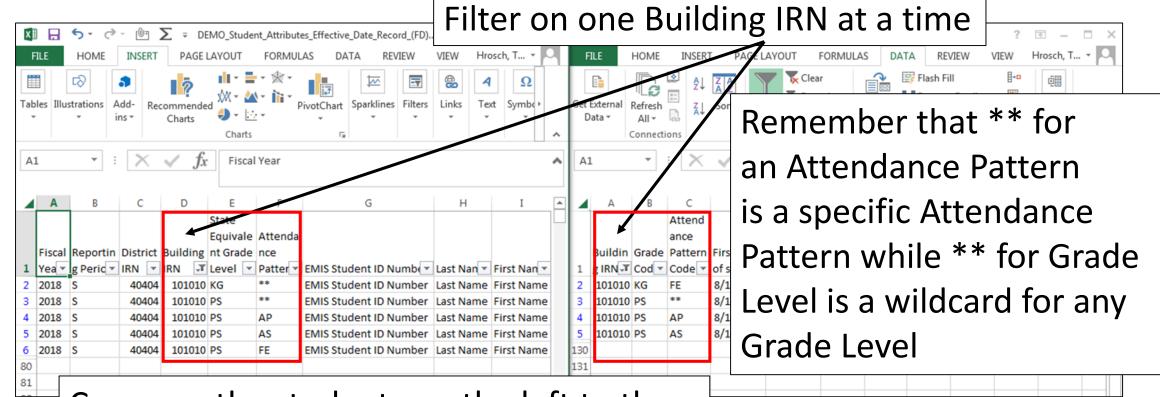
- The two spreadsheets have unduplicated instances of Building IRN,
   Grade Level and Attendance Pattern
- Compare the two spreadsheets to verify that all combinations in the FD file appear in the DL file
- When Grade Level contains asterisks \*\*, the asterisks should be treated as wildcards that can be matched against any grade level
- There could be DL records that are not represented in the FD file

## **Arrange All**

With both spreadsheets open, from the View Tab, select "Arrange All"



## **Apply Filters and Compare Data**



Compare the students on the left to the DL file on the right. Are all combinations appearing on both files?

#### **Quick Check**

Since Calendar Data and Student Data don't meet until FTE Reports are generated, data integrity issues could exist without error. Cross check the data to identify issues between calendars and students.

- Are you comparing data from the most recent EMIS submissions?
- Do all student Building IRN, Grade Level, and Attendance Pattern combinations appear in the DL file?
- Should any unused calendars be set to not report to EMIS?

# Staff Data Formatting to Share with District Staff

## **Sharing Staff Data**

Staff EMIS data can come from a separate source system that is often managed by someone other than the EMIS Coordinator

- Sharing staff EMIS data can be a helpful when correcting and verifying the data
- Consider sharing
  - Level 1 Validations
  - Submission Files
  - Level 2 Reports
  - Staff and Course sections of the EMIS Manual

### **EMIS Manual Sections**

#### 3.9 Position Codes

NUMERICAL LISTING OF POSITION CODES
Official/Administrative Positions (1xx)

Table 1. Official/Administrative Positions

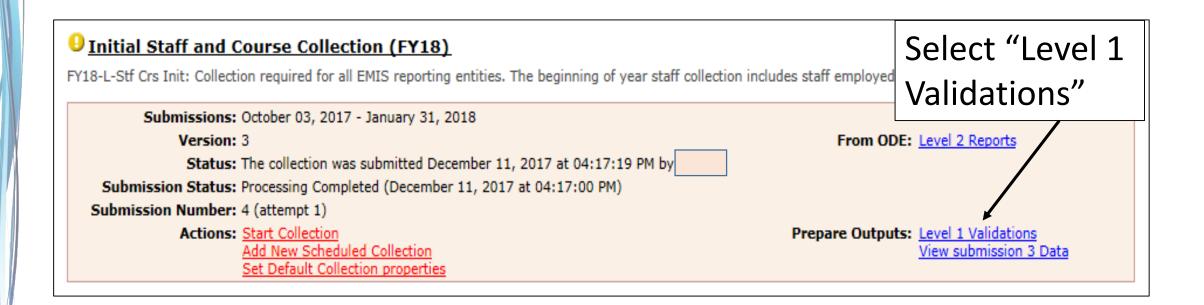
Position Code	Description	submission file such a							
101	Administrative Assistant Assignment An assignment to perform activities assisting an executities in the school district.	Employment File (CK)							
103	Assistant, Deputy/Associate Superintendent Assignment An assignment to a staff member (e.g., an assistant, deputy or associate superintendent of assistant) to perform high-level, system-wide executive management functions in a school trict.								
104	Assistant Principal Assignment An assignment to a staff member (e.g., an assistant, de high-level executive management functions in an indivious a school district								

Sections of the EMIS Manual could be helpful to staff as they verify data in an EMIS submission file such as the Staff Employment File (CK)

## Prepare the Data for Review

- Some EMIS data files and reports can be quite large
- Preparing the data before distribution could bring back better results from staff
- Consider doing some of the following:
  - Basic report preparations such as wrapping the text in the header row
  - Deleting unneeded columns
  - Sorting or Filtering
  - Separating data by building
  - Highlighting cells
  - Printing or emailing the data

## Staff and Course Level 1 Validations



## Level 1 Validations

#### Initial Staff and Course Collection (FY18)

Submission Number 4 (attempt 1), LEA: Franklin-Monroe Local

Validation exceptions are listed by record type and exception severity. To generate the exception report for one record type and/or exception according to the corresponding and the exception according to the exception according row and column.

Last Prepared: December 11, 2017 (17 days ago) at 04:15:17 PM

Record Type	Fatal	Critical	Warning	Info	Total Lv1Er	I	Depnd Invalid	Valid Recs	
Career-Technical Education Correlated Class Record (CV)	0	0	0	0	0	$\top$	0	0	
Contract Only Staff Record (CC)	0	0	0	0	0		0	0	
Contractor Staff Employment Record (CJ)	0	0	0	0	0				-
Course Master Record (CN)	0	0	0	0	0				

Output Type The validation exception report can be viewed as an HTML pop-up or downloaded as a CSV file(s), CSV file(s) will download as a single .zip file. O HTML O CSV CSV Output Option You can create a separate CSV file for each Record Type by checking the box below: Record Type

Select Output Type "CSV" and uncheck the CSV Output Option for "Record Type"

Mapped Classroom Code Record (CM) Staff Course Record (CU) Staff Demographic Record (CI) 12 Staff Employment Record (CK) 13 Staff Missing Override Record (CP) Staff Summer Employment Separation Record (CL) Student Course Record (GN) Total Counts:

Generate Full Validation Report

Click on the link below to download the zip file.

Report(s)

AllRTs046649-2018L1STRv2-sub4-1AllSevs2017-12-28 08-12-31.csv

Select "Generate Full Validation Report" and then open the report

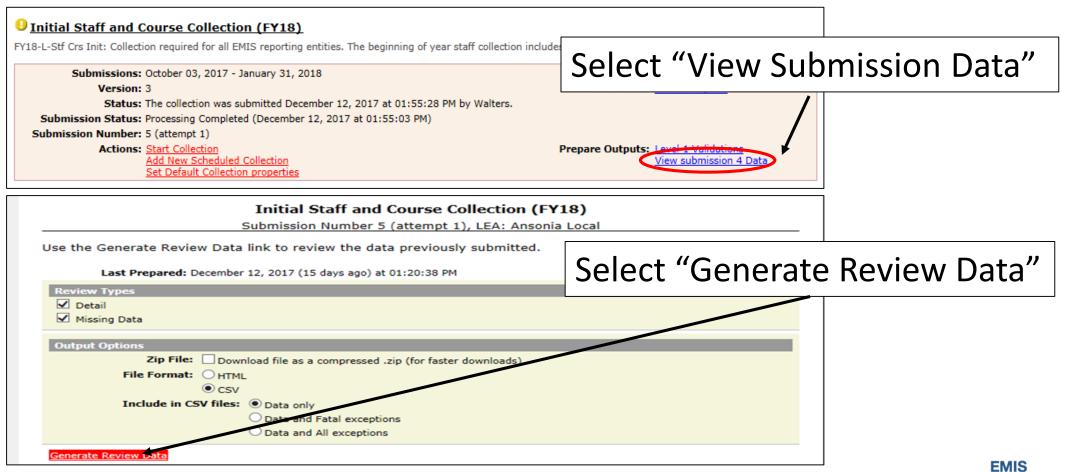
## Level 1 Validations, cont'd

A	Α	В	С	D		Е	F	G	Н	I	J
		Error							Local Classroom		Local Contract
_	Number	•	Message	Description	_	ployee ID	Employee Name	State Staff ID	Code	Code	Code
	CU.0007			(CU100) Missing value for Highly Qualified Teacher	_			CI-I-CI-FFIE	A A LIC 04550 A 00		
3	CU.0007	Fatal		(CU100) Missing value for Highly Qualified Teacher	_	Heir	ng Evca	l can	make v	worl	inσ
4	CU.0007	Fatal	Element value cannot be blank	(CU100) Missing value for Highly Qualified Teacher	En	<b>U</b> 311	ig Lace	Can	make v	VOII	VIII 18
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6	CU.0007	Fatal	Element value cannot be blank	(CU100) Missing value for Highly Qualified Teacher	En	tnrc	ougn Le	svei T	Validat	tion	S
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8	CU.0007	Fatal	Element value cannot be blank	(CU100) Missing value for Highly Qualified Teacher	En	easi	ier sinc	e rec	ords ca	n he	2
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12	CU.0007	Fatal	Element value cannot be blank	(CU100) Missing value for Highly Qualified Teacher	En	<del>projec ro</del>	employee Name	State Stair ID	AA110 200 01		
13	CU.0007	Fatal	Element value cannot be blank	(CU100) Missing value for Highly Qualified Teacher	Em	ployee ID	Employee Name	State Staff ID	AAHS-445UR-01		
14								- ID	AAHS-240UR-01		
15 16	cl B6	≥tດr	e sending th	is to district statt for	r	evie	W.	F ID	AAHS-300J7-01		
16	CL	Before sending this to district staff for review,						FID	AAHS-300J7-02		
	consider sorting by Employee Name or adding									Î	

additional explanations to aid in identifying the issue

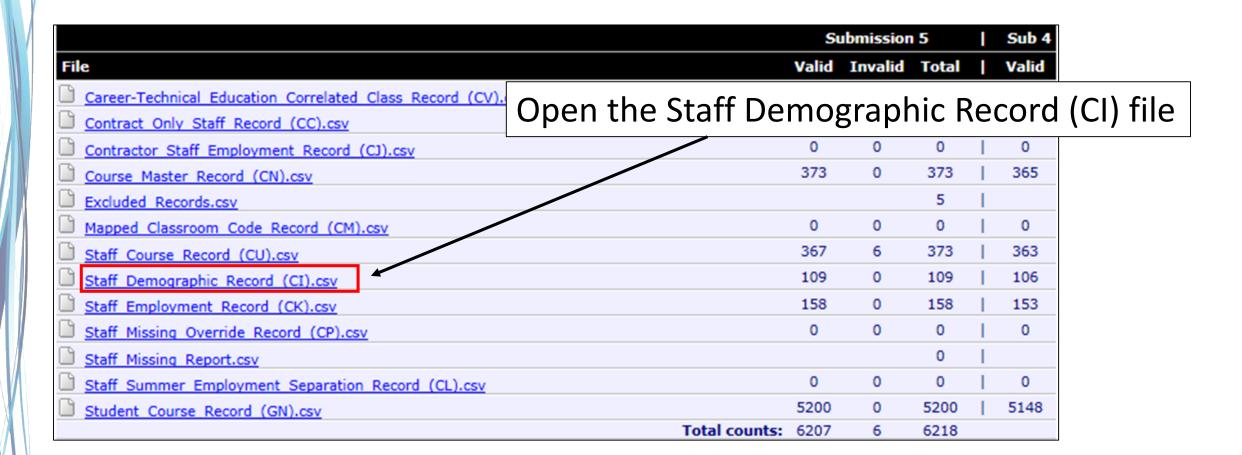
## **Submission Files**

#### Staff and Course Collection Submission Files/Review Data



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## Review Files cont'd



## **Sharing Data for Review**

- Prepare the file for review
- Add grid lines
- Print titles at top of each page
- Add a header
- Select page setup options
- View print preview

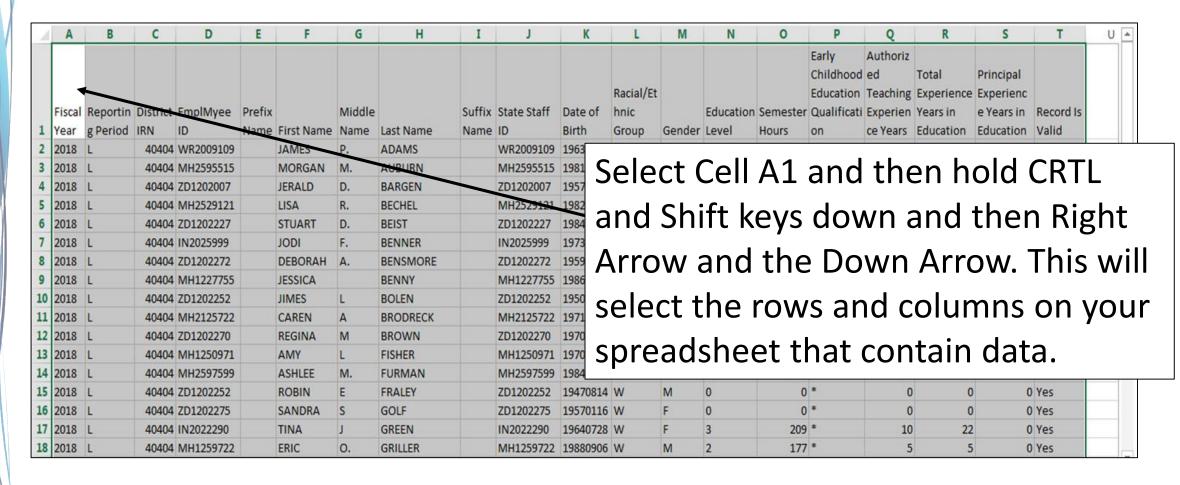
# Prepare the Staff Demographic File (CI)

#### Demographic file contains one line per staff member

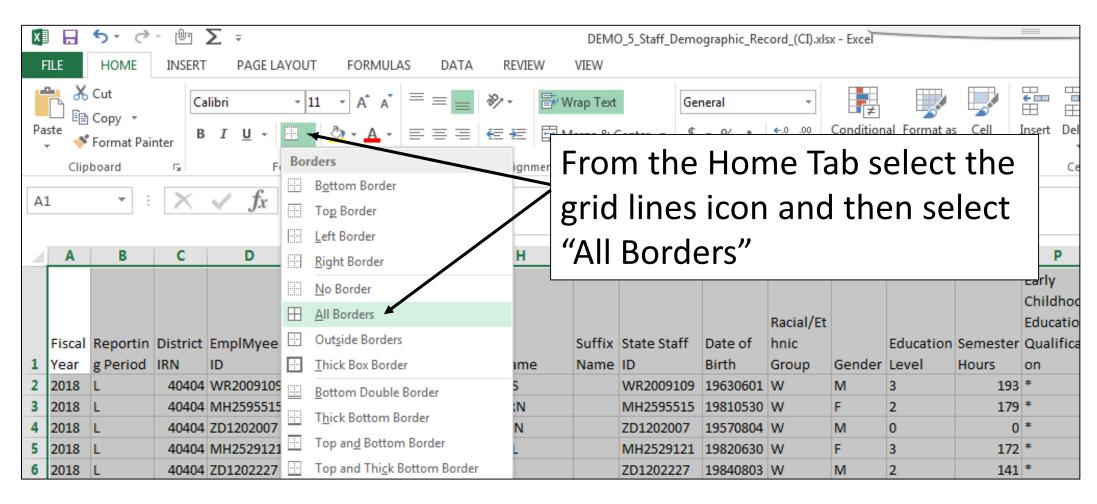
Prepare your spreadsheet to be user friendly

1 A	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	P	Q	R	S		Т
															Early	Authoriz				
											D : - 1 / 54				Childhood		Total	Principal		
Fice	l Poportin	District	EmplMyoo	Drofiv		Middle		Cuffix	State Staff	Data of	Racial/Et		Education	Samastar		_	Experience			locard I
			EmplMyee	Prefix	5: N					Date of	hnic	0			Qualificati			e Years in		Record Is
Year	0		ID	Name	First Name	Name	Last Name	Name		Birth	Group	Gender	Level	Hours	on		Education	Education	-	/alid
2018	B L	40404	WR2009109		JAMES	P.	ADAMS		WR2009109	19630601	W	M	3	193	*	25	30	<u> </u>	5 Y	es
2018	B L	40404	MH2595515		MORGAN	M.	AUBURN		MH2			_	•			1 -			0 Y	es
2018	B L	40404	ZD1202007		JERALD	D.	BARGEN		ZD12 - (	Pade	≥r d	ata	IS W	<i>y</i> ran	ned	l to	p rov	<b>'V</b> / L	0 Y	es
2018	B L	40404	MH2529121		LISA	R.	BECHEL		MH2	-	J	aca			PCG	,	ρ.υ	•	0 Y	es
2018	B L	40404	ZD1202227		STUART	D.	BEIST		ZD12	<b>c</b> – –		_ 11	عداد	_ :	.:	_	_		0 Y	es
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2018	B L	40404	ZD1202272		DEBORAH	A.	BENSMORE		ZD12										0 Y	/es
2018	B L	40404	MH1227755		JESSICA		BENNY		MH1227755	19860927	W	F	2	173	*	3	3		0 Y	/es
2018	B L	40404	ZD1202252		JIMES	L	BOLEN		ZD1202252	19500910	W	М	0	0		0	0	,	0 Y	/es
2018		40404	MH2125722		CAREN	A	BRODRECK		MH2125722	19710518	W	F	3	169	*	15	15		0 Y	/es
2018			ZD1202270		REGINA	M	BROWN		ZD1202270	19701017		F	0	0		0			0 Y	/es
2018			MH1250971		AMY	1	FISHER		MH1250971	19700902		F	2	136		14	_		0 Y	
2018			MH2597599		ASHLEE	M.	FURMAN		MH2597599	19840718		F	3	161		12			1 Y	
			ZD1202252		ROBIN	E.	FRALEY		ZD1202252	19470814		M	0	0		0			0 Y	
2018						_							_	_		_				
2018			ZD1202275		SANDRA	S	GOLF	-	ZD1202275	19570116		F	0	0		0			0 Y	
2018	3 L	40404	IN2022290		TINA	J	GREEN		IN2022290	19640728	W	F	3	209	*	10	22	4	0 Y	es

#### Select Cells with Data

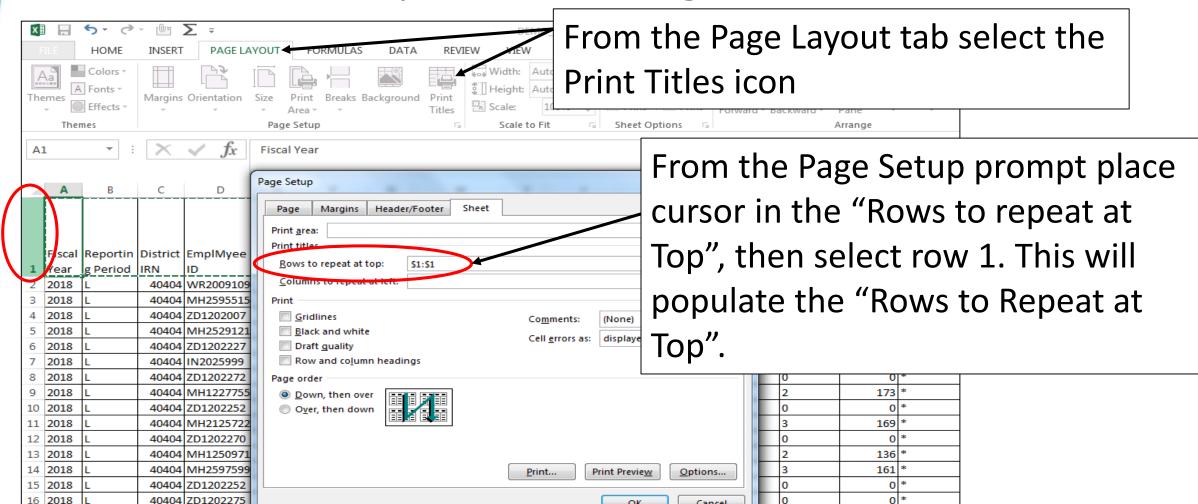


#### Add Grid Lines



## Print Titles at Top of Each Page

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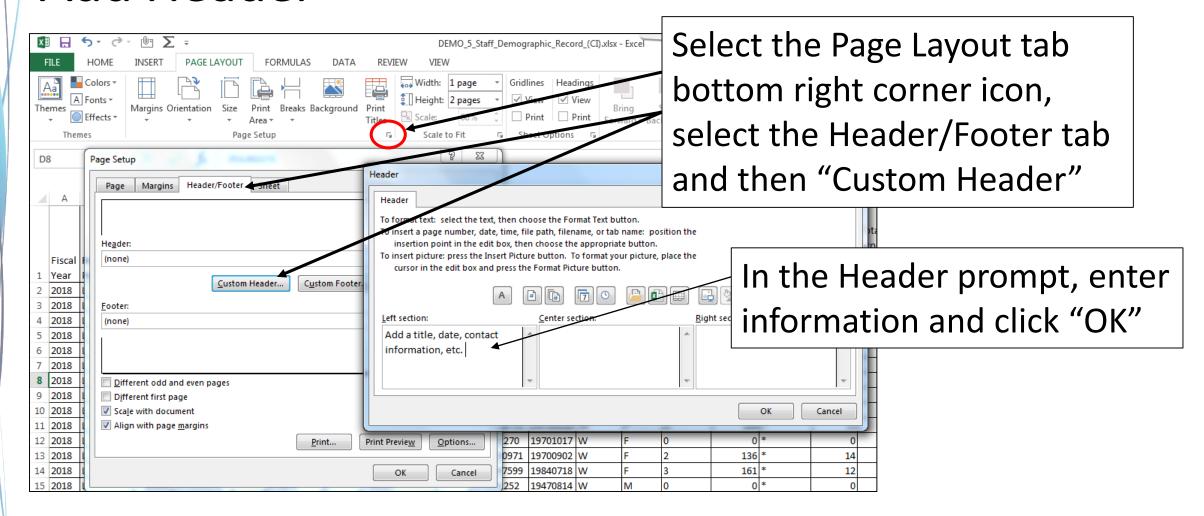


Cancel

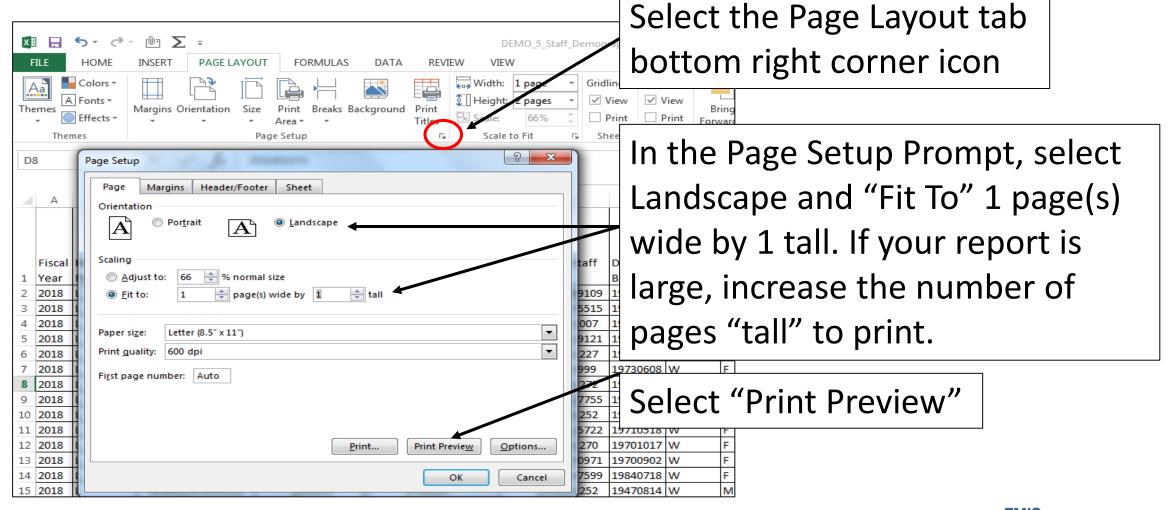
0|:

209

### Add Header



Page Setup



### **Print Preview**

Print

Printer

Settings

Upstairs Copier

Print Active Sheets Only print the active sheets

Print One Sided

1,2,3 1,2,3 1,2,3 Landscape Orientation

Letter (8.5" x 11") 8.5" x 11" Normal Margins Left: 0.7" Right: 0.7" Fit Sheet on One Page Shrink the printout so that it...

Collated

Only print on one side of th.

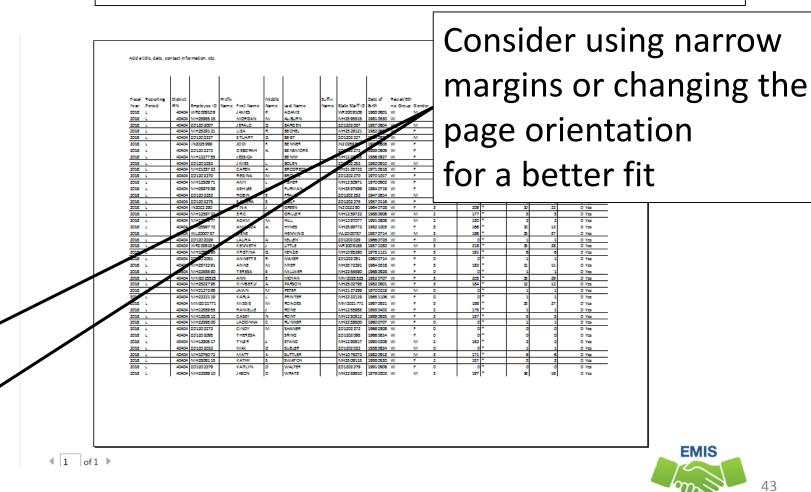
Copies: 1 🗘

Printer Properties

Page Setup



Print Preview is a great way to adjust the data on the page prior to printing



#### **Quick Check**

Formatting your reports prior to printing can result in easier to review documents that district staff will appreciate. Adding a title, date and contact information will allow easy tracking of when and to whom the data was sent.

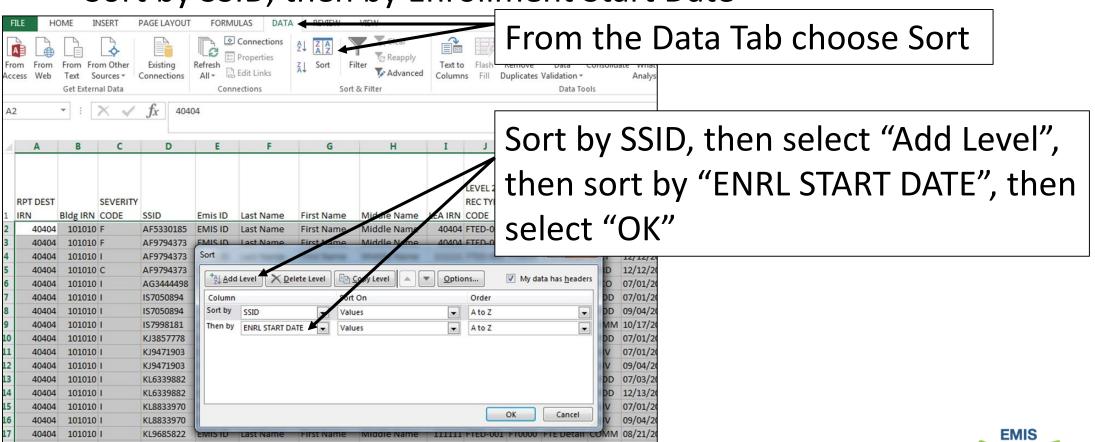
- What columns of data on your report could be hidden or deleted to make the report easier to review?
- Have you included instructions to help understand the data in the report?
- Are you able to set up your report into a printable format?

# FTE Detail Report Subtotaling

## FTE Detail Report Subtotaling

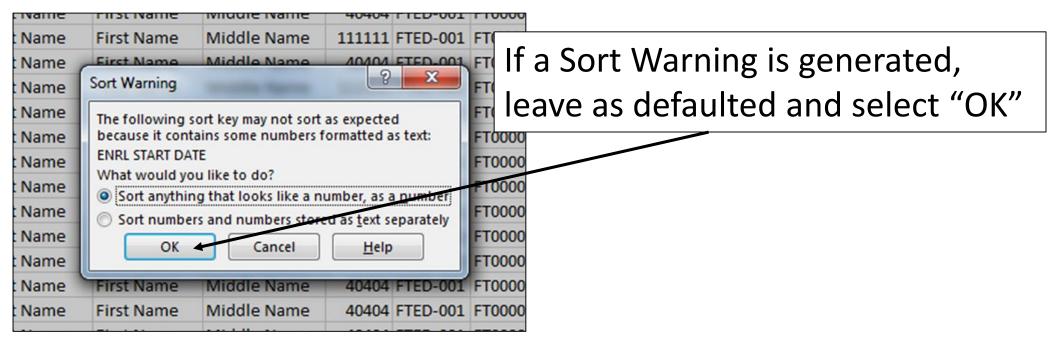
#### Subtotal the FTE Detail Report

Sort by SSID, then by Enrollment Start Date

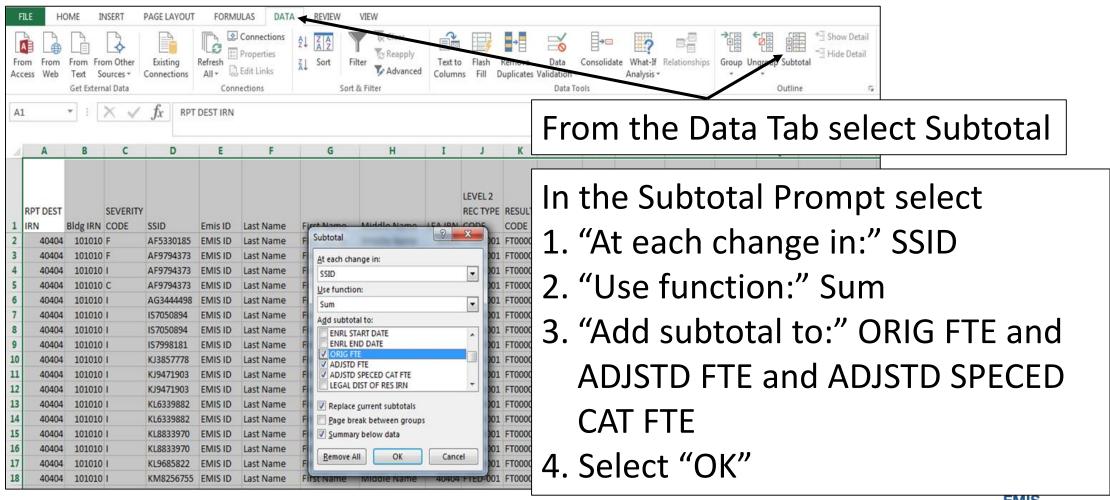


## **Sort Warning**

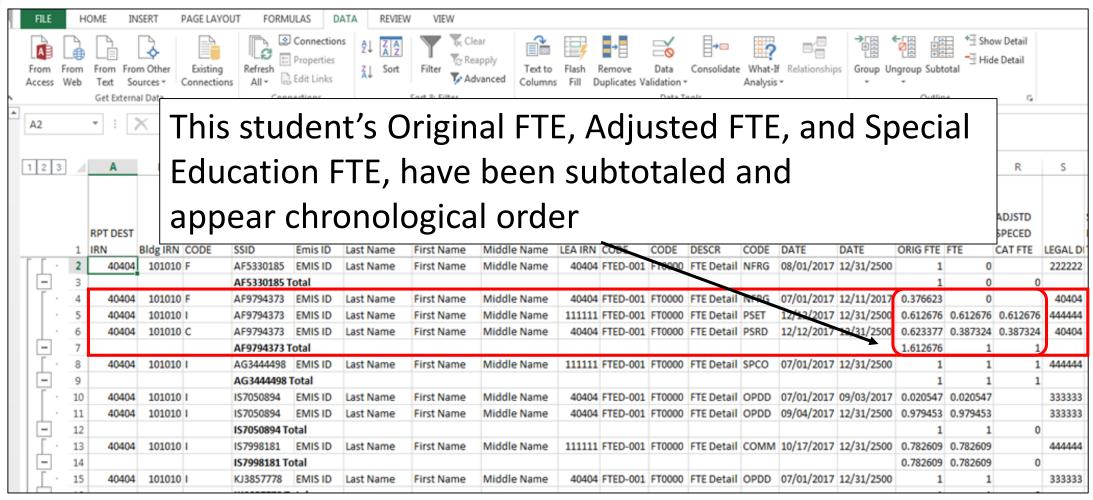
This Sort Warning is generated because the ENRL START DATE column contains some numbers that are formatted as text



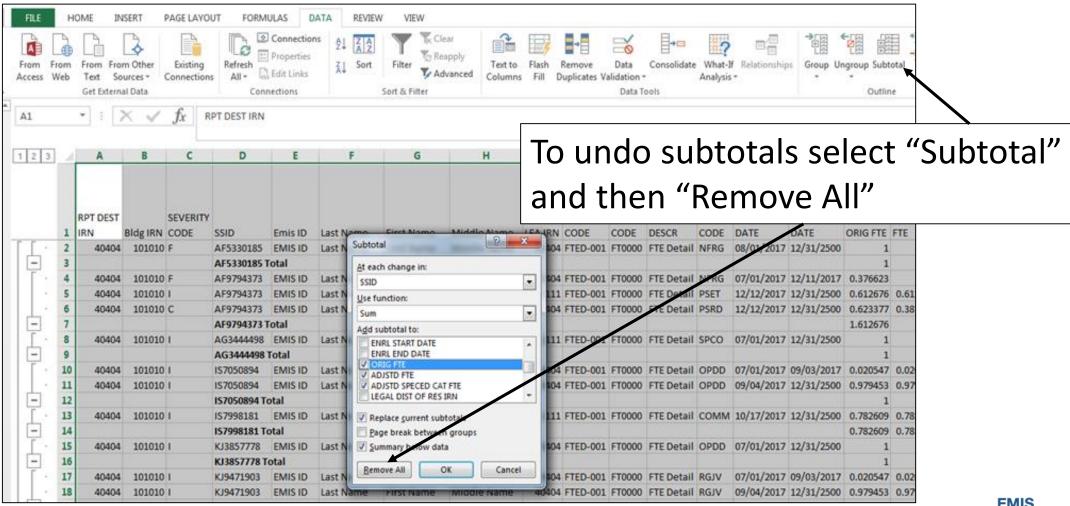
# **Apply Subtotals**



# FTE Detail Report Subtotaled



#### **Undo Subtotals**



#### **Quick Check**

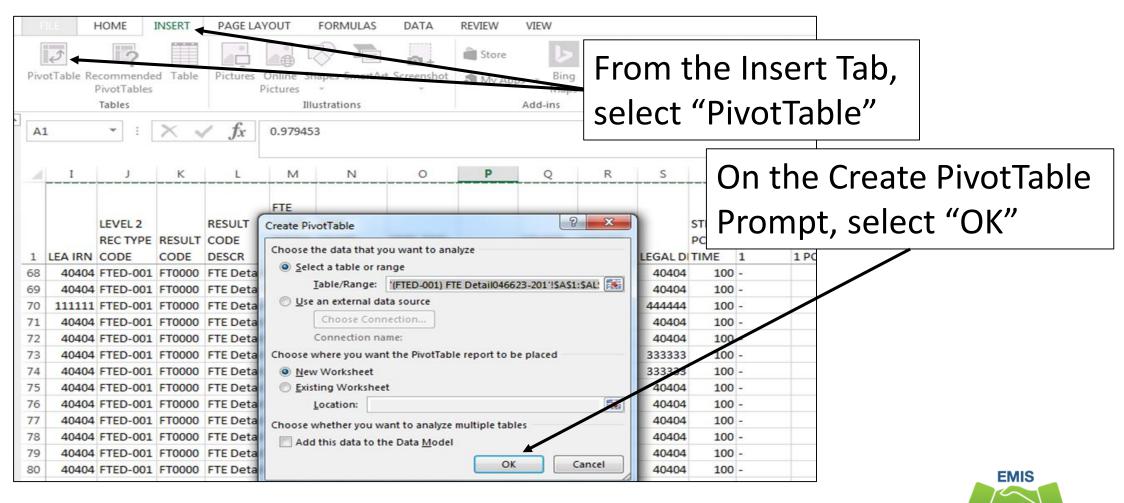
Subtotaling the FTE Detail
Report provides a format for
easier analysis of the data.
Since many students have
multiple FTEs calculated,
using Excel to sum by student
will allow the detail to be
available while providing
subtotals below each student.

- Are there students with Adjusted or Special Education FTEs that are less than the Original FTE?
- Are you using this report with your FTE Adjustment report to identify reasons for the adjustments?
- Are you saving your reports between reviews?

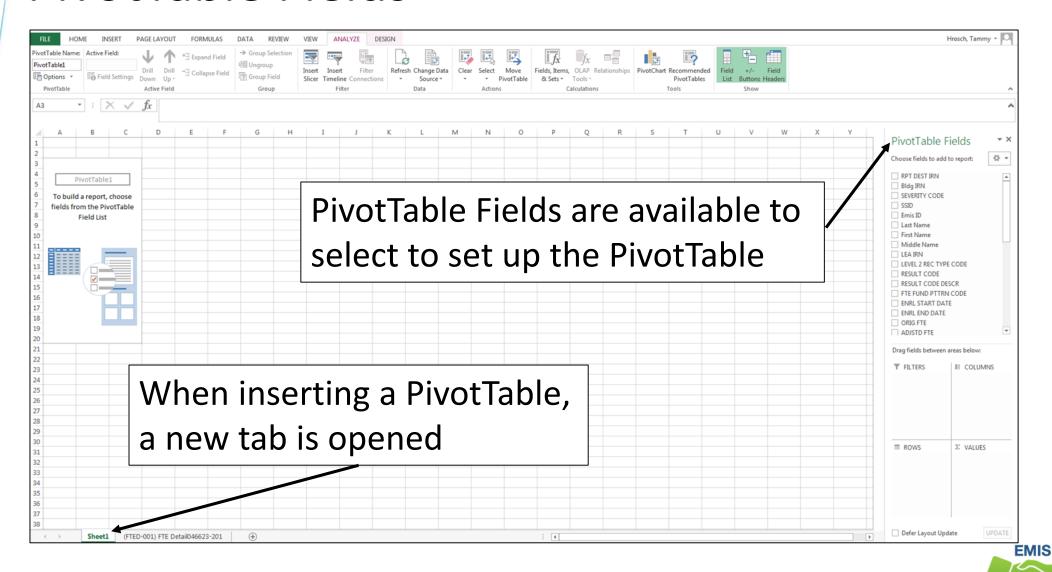
# FTE Detail Report PivotTable

## FTE Detail Report PivotTable

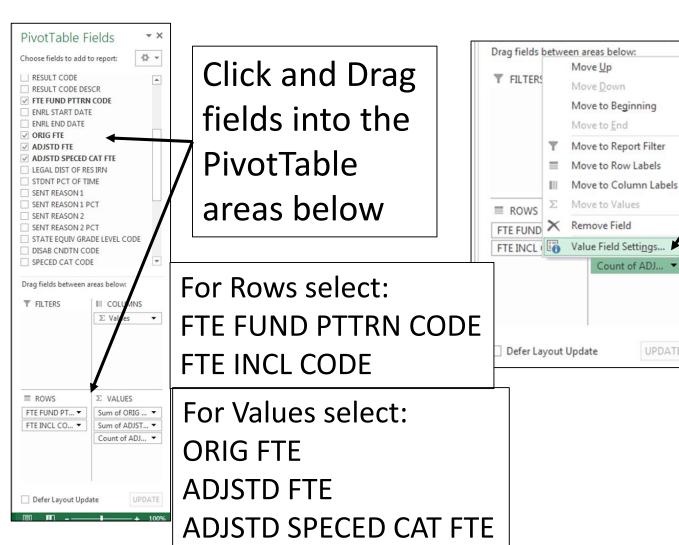
#### Create a PivotTable in an FTE Detail Report



### PivotTable Fields

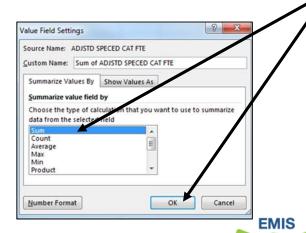


## Select PivotTable Fields



Select the "Count" of ADJSTD SPECED CAT FTE, then in the menu select "Value Field Settings"

In the Value Field
Settings prompt, select
"Sum" and "OK"



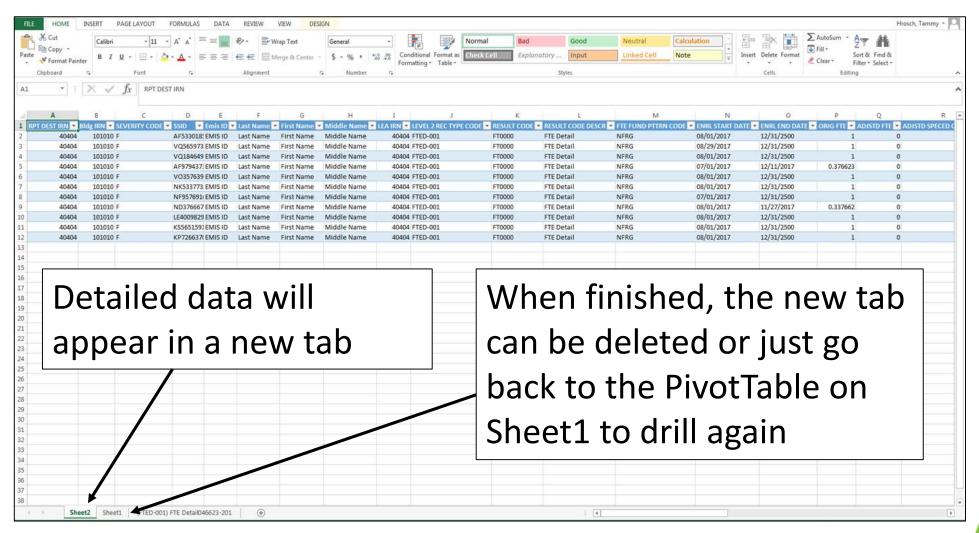
## PivotTable

Row Labels 🔻	Sum of ORIG FTE	Sum of ADJSTD FTE	Sum of ADJSTD SPECED CAT FTE
<b>⊕ COMM</b>	1.901528	1.901528	
<b>■ NFRG</b>	9.714285	0	
NONE	9.714285	0	
<b>□ OPDD</b>	19.502042	19.502042	2
FULL	3.558118	3.558118	
NONE	15.943924	15.943924	2
<b>□ OPID</b>	1	1	
PART	1	1	
<b>■ PSET</b>	0.612676	0.612676	0.612676
FULL	0.612676	0.612676	0.612676
<b>■ PSRD</b>	0.623377	0.387324	0.387324
FULL	0.623377	0.387324	0.387324
<b>■ RGJV</b>	48.343595	48.325029	3
FULL	42.343595	42.325029	3
PART	6	6	
<b>■SPCO</b>	1	1	1
FULL	1	1	1
Grand Total	82.697503	72.728599	7

Click on specific values to drill into the detailed data

When drilling on a number within the PivotTable, all of the data within the row will appear

### **Detailed Data**



#### **Quick Check**

PivotTables can provide a summary of a large amount of data that allows the data to be analyzed in smaller sections. Try using Recommended PivotTables to think of different ways to analyze your data.

- Are you able to create a PivotTable and drill into the detailed data?
- What other fields in the FTE Report could be brought into a PivotTable?
- Can you think of other reports that could be analyzed using PivotTables?

## Summary

- Basic Excel techniques can be very useful when troubleshooting
  - EMIS data in the Student Information System
  - EMIS reports
  - preview/review files
- These techniques should be part of your everyday practices

#### Resources

- Microsoft Excel Help within Excel "?" Articles and Videos
- Google it
- Microsoft Excel Classes
- Your ITC

# Questions?