More Excel as a Tool to Troubleshoot SIS Data for EMIS Reporting



Overview

- Basic Excel techniques can be used to analyze EMIS data
 - From Student Information Systems (SISs)
 - From the Data Collector
 - On ODE EMIS reports
- This presentation will review Excel tools
 - Help with the analysis of source data
 - How source data relates to EMIS data reporting
 - Reinforce and enhance Excel skills



Outline

- Excel Tabs and the Quick Access Toolbar
- Creating a Source Data File
- V-Lookup, Conditional Formatting, and Pivot Tables
- Additional EMIS Tips, Tricks, and Shortcuts



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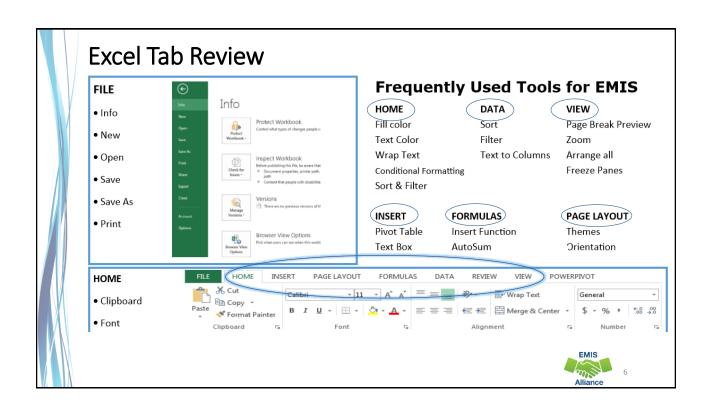
Excel Tabs and the Quick Access Toolbar

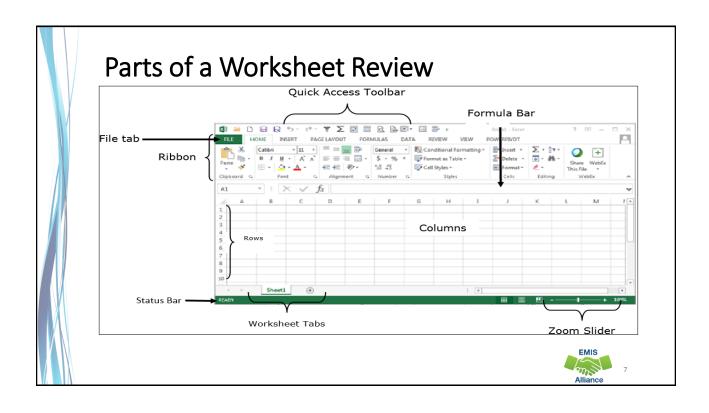


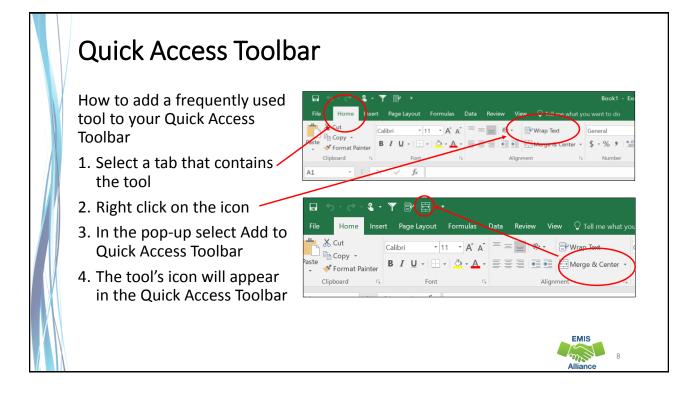
Excel Tab Review

- FILE
- HOME
- INSERT
- PAGE LAYOUT
- FORMULAS
- DATA
- REVIEW
- VIEW









Quick Check

Excel can be intimidating. Empower yourself by creating an Excel environment that works for you. Learn shortcuts in Excel so that you can spend more time working on your data and less time figuring out how to use Excel.

- Are you able to navigate the tabs in Excel to find the tools you need?
- Are you able to add tools to your Quick Access Toolbar for ease of use?
- Are you getting more comfortable with Excel?



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Creating a Source Data File



Source Data File

- Creating a source data file can be a quick way to analyze your data before it makes it to the Data Collector
- Adding additional data from outside sources can enhance an all-inone source data file
- Cross check key EMIS reporting elements by filtering various categories within your source data file



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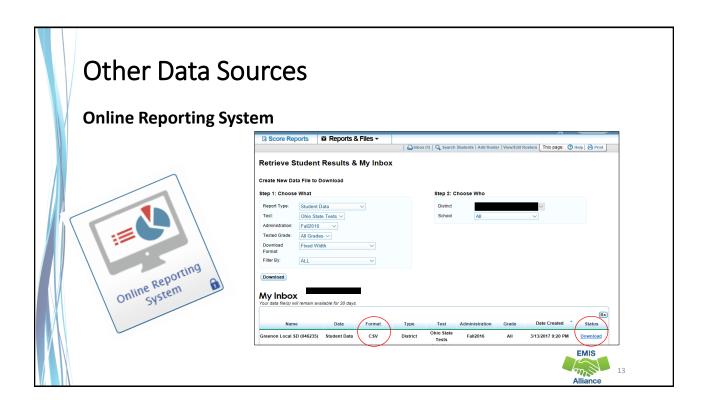
Frequently Used Source Data Fields

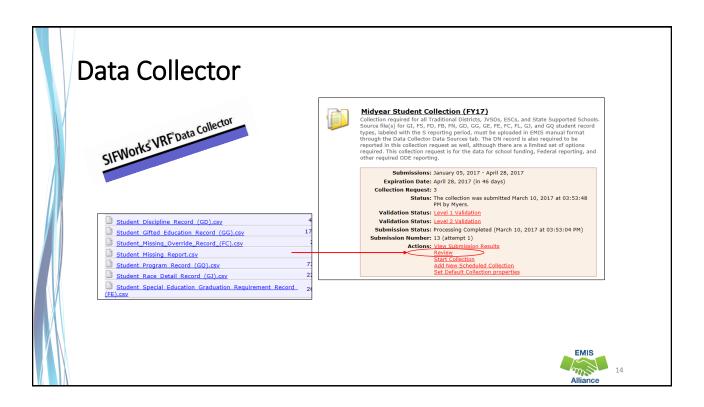
Last Name
First Name
State Student ID
EMIS ID
Date of Birth
Gender
Building IRN
Grade Level
Grade Next Year

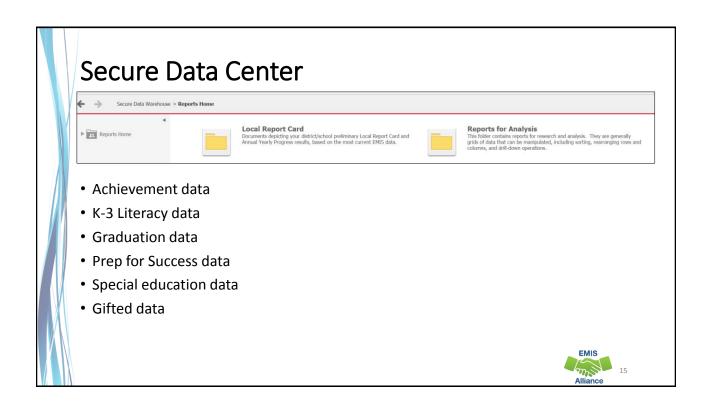
How Received
Sent Reason
District Relationship
Percent of Time
District of Residence
Withdraw Reason
Effective Start Date
Effective End Date
Tuition Type

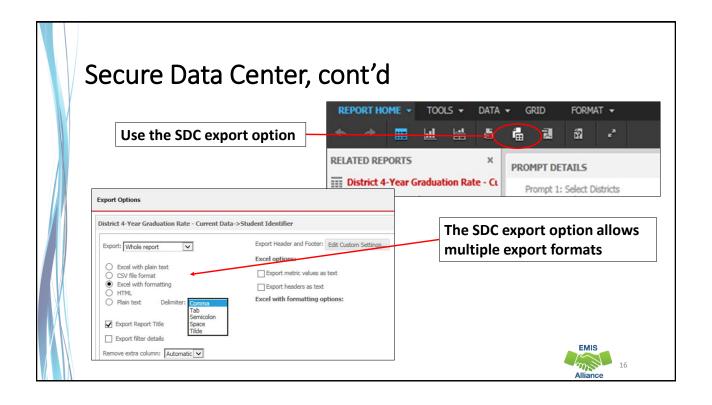
Homeless Status
Disadvantgement
Limited English
Disability Condition
Attendance Pattern
MOA IRN
Accountability IRN
Fiscal Year Began 9th
Diagnostic Results

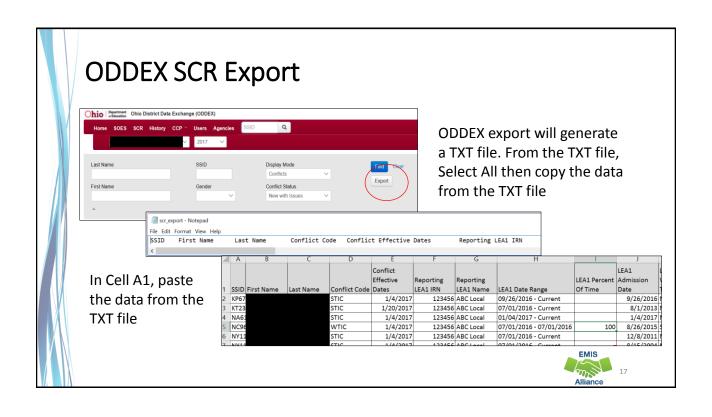












Combined Source Data File Example • Source Data File – 12th Grade ssid DISABILITY CONDITION KQ3120909 ETHAN THOMAS 123467 12 12 **Students** PQ9733522 OLIVIA WILLIAMS 123458 IX6825340 LIAM IONES 123459 12 IX9047510 OLIVER WALKER 123478 IY8586474 EMMA SMITH 12345 12 JT8837916 SOPHIA BROWN 123460 15 12 JN5602659 AVA MILLER 123462 12 PP7370386 WILLIAM JE5216291 ABIGAIL JACKSON DISABILITY • Special Education Graduati CONDITION OGT - R OGT - W on Requirement (FE) -10 **Assessment Exemption** 15 Υ preview/review file 12 Υ 10 **EMIS**

Combined Source Data File Example cont'd

This combined Source Data File now includes Assessment requirements for 12th grade students with a disability



SSID 🔻	FIRST NAME *	LAST NAME *	STUDENT ID ▼	GRAD⊸T	DISABILITY CONDITION	OGT - R	OGT - W	OGT - M	OGT - S ▼	OGT - C ▼
KQ3120909	ETHAN	THOMAS	123467	12	12	Y	N	N	Y	Υ
JT8837916	SOPHIA	BROWN	123460	12	15	Υ	N	Y	N	Y
PP7370386	WILLIAM	TAYLOR	123465	12	10	Υ	N	Y	Y	Υ
JE5216291	ABIGAIL	JACKSON	123468	12	10	Υ	N	Υ	Y	N
LIT5745888	Derik	leter	321654	12	13	Y	N	N	Y	Y



Cross-Check Key EMIS Reporting Elements

- Are all Open Enrolled In and Out students marked correctly
 - How Received and Sent Reason vs Student Address
- Are all students with a disability marked correctly
 - Student Disability Category vs valid ETR dates
- Are your Concentrators marked for the current year
 - Student courses vs CTE Program of Concentration Flag
- What other areas do you cross check in your source data prior to collections



Quick Check

Having a source data file to review prior to data collection will help to ensure quality data is being collected at the time of a submission.

Consider adding additional data from outside sources.

- Are you able to create your own source data File?
- What other data sources are available to compliment your source data file?
- What multi-filtering cross-checks can you do prior to collecting and submitting data?



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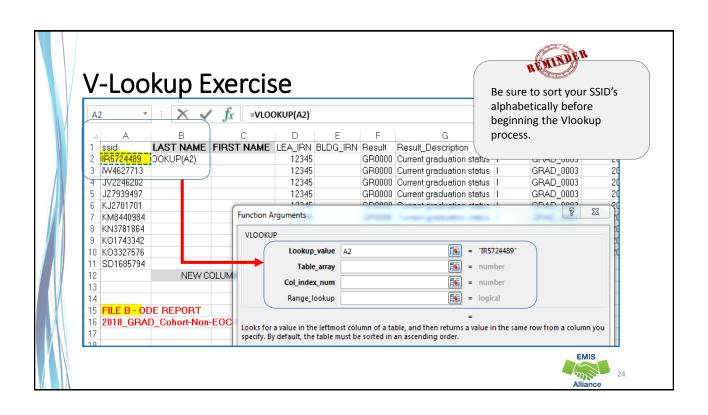
V-Lookup, Conditional Formatting, and Pivot Tables



V-Lookup

- Problem: Identifiable data is on one report, but not on another
- Solution: V-Lookup between Source Data File and report
 - Student names
 - Student test scores
 - Student membership codes
- What do they have in common?
 - SSID
- What reports might come back with just an SSID?





V-Lookup Exercise Steps

- Open Source Data File Sort Ascending by SSID and save (Do NOT close file)
- 2. Open report missing Student names **Data Collector 2018_GRAD_Cohort-Non-EOC- Pts-Detail —** Sort Ascending by SSID and save (Do NOT close file)
- 3. Use a new tab in **Data Collector 2018_GRAD_Cohort-Non-EOC-Pts-Detail** and rename Sheet 1 Source Data
- 4. Copy and paste the data from **Source Data File** into the <u>Source Data worksheet tab</u> into **Data Collector 2018_GRAD_Cohort-Non-EOC-Pts-Detail**
- 5. Move State Student ID to column A (**Both files**)

 Always move the SSID field to column A first in the files you will be using
- 6. Insert one column for last name and one column for first name into Data Collector - 2018_GRAD_Cohort-Non-EOC-Pts Detail



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V-Lookup Exercise Steps, cont'd

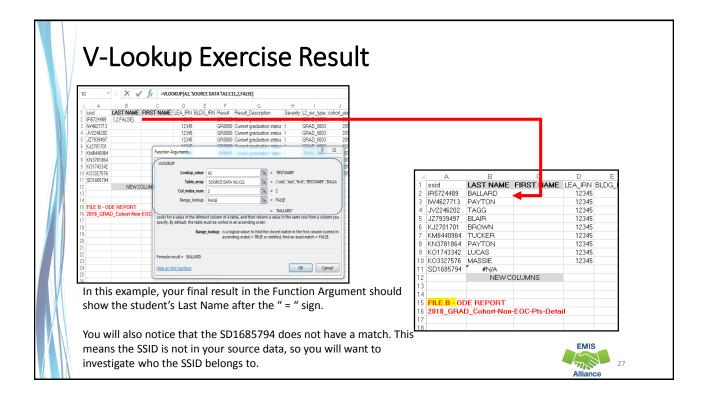
- 7. In Cell B2 of **Data Collector 2018_GRAD_Cohort-Non-EOC-Pts-Detail** (LAST NAME) click on the function icon.
 - A. The Insert Function pop-up should appear. Select VLOOKUP and OK
 - B. The Function Arguments popup should now appear.

 DO NOT HIT ENTER/OK UNTIL ALL FOUR VALUES ARE INSERTED
 - C. Lookup_value **Data Collector 2018_GRAD_Cohort-Non-EOC-Pts-Detail**, click in Cell A2 (SSID)
 - D. Table_array **SOURCE DATA**, <u>Highlight area that you want the LOOKUP to look at then press F4 to make the range absolute</u>
 - E. Col_index_num SOURCE DATA, 2 (column number the LAST NAME is in)
 - F. Range lookup FALSE
- 8. Drag or copy down the VLOOKUP result to the end of column B in

Data Collector - 2018_GRAD_Cohort-Non-EOC-Pts-Detail

9. Follow the same steps to come up with the First Name column

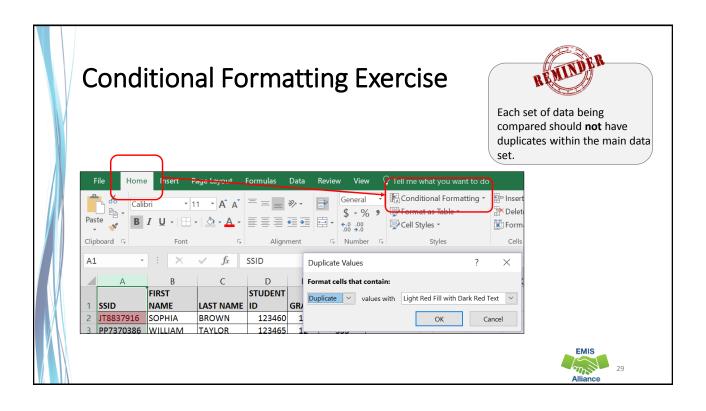




Conditional Formatting

- Problem: How do I know who's missing and who is not when comparing two sets of data?
- Solution: Use Conditional Formatting between source data file and report
- What should they all have in common?
 - SSID
- Compare a list of students from your SIS who were required to take a test against the test results
- Compare a list of students in grades 12 and 23 against a list of students who are reported as withdrawn with a code of 99 and a diploma date





Conditional Formatting Exercise Steps

- 1. Open the Source Data File V-lookup and Conditional Formatting file
- 2. Click on the CF Source Data tab
- 3. Copy and paste the list of known SSIDs (*column o*) to the bottom of Column A. These were SSIDs from the Secure Data Center
- 4. Select Column A (SSIDs to compare)
- 5. Go to Home > Conditional Formatting > Highlight Cell Rules > Duplicate Values
- 6. At the Duplicate Values prompt, it should default to "Duplicate" values with "Light Red Fill with Dark Red Text". Select "OK"
- 7. All SSIDs that are in the SDC List will be highlighted in light red and have dark red text
- 8. Are students counting that should count? Who is missing? Who is on the list but shouldn't be?



Conditional Formatting Exercise

4	А	В	С	D	Е	F	
		FIRST		STUDENT		EMIS	
1	SSID	NAME	LAST NAME	ID	GRADE	SITUATION	
2	JT8837916	SOPHIA	BROWN	123460	12	351	
3	PP7370386	WILLIAM	TAYLOR	123465	12	355	
4	KQ3120909	ETHAN	THOMAS	123467	12	355	
5	JE5216291	ABIGAIL	JACKSON	123468	12	382	
6	KP6745575	JAMES	WHITE	123469	11	382	
7	MC2155271	EMILY	HARRIS	123470	11	382	
8	KO1739256	JAMES	MARTIN	123471	11	484	
9							
10	JT8837916						
11	PU6370386						
12	TO3120875						
13	JE5216291						
14	KP6745575			_			
15	MC2158571		— Sec	ure D	ata	Cente	r
16	KO1739256		T:1-	C		ad Daa	.
17	JS7547388		File	- CO	oy a	nd Pas	tea
18	KP6701486		dat	2			
19	LK5757368		uat	a			
20							

Source Data File

In this example, any SSID that is in both lists is now highlighted in light red and the font color has changed to dark red.

When looking at your own data, who isn't appearing in your SDC file that should be? Is there someone in the list that appears in both the Source Data File and SDC file that shouldn't be?

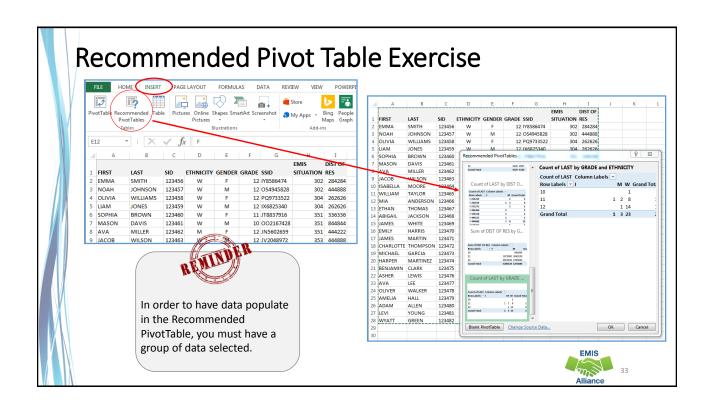


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Pivot Table

- Problem: Besides filtering, how do I create a summary analysis of data that will still allow me to view the data as a whole if needed?
- Solution: Create a Pivot Table from your source data file
- This is an interactive summary report that you create
- Think about the end result before diving in
 - View the recommended Pivot Tables to get an idea of different options
 - What data do you want to know as a summary and how do you want to see it?





Recommended Pivot Table Exercise Steps

- 1. Open your Source Data file and highlight the data that you want to include in your summary
- 2. Next, select Insert > Recommended Pivot Tables
- 3. Scroll down through the Help tool's recommendations as to what details you would like to see in the Pivot Table
- 4. Select the highlighted Pivot Table you want to work with and click OK
- 5. A new worksheet will appear next to the original worksheet
- 6. Rename the new worksheet

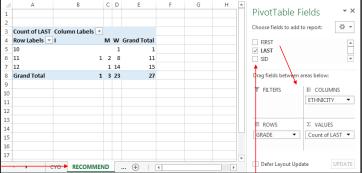


Recommended Pivot Table Exercise Result

In this example we chose to look at Ethnicity by Grade levels

You can adjust any of the views by dragging them between the filter criteria or back up into the field selection area

> New Worksheet with Excel Recommended Pivot Table



Drag Fields in and out of your list or across to Filters, Columns, Rows or Values to create the final summary (Pivot Table) that you would like



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Quick Check

V-Lookup, Conditional Formatting, and Pivot Table tools can take your ability to review, sort, and filter your data to a whole new level.

The more you use these tools, the easier it will be when analyzing reports and sharing that data with others in the district.

- What additional data sources can I use for V-lookup to my source data?
- Will Conditional Formatting help with Secure Data Center (SDC) reports?
- What ODE reports could I duplicate with my source data by creating a Pivot Table?



Additional EMIS Tips, Tricks & **Shortcuts**



Other Tools for your EMIS Excel Toolbox

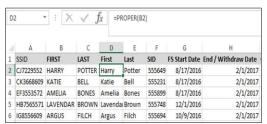
Frequently used tips from other EMIS Coordinators have been included with this presentation

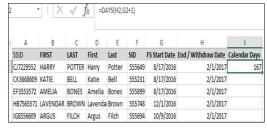
- Changing uppercase names to proper case
- Calculating the number of calendar days between two dates
- Calculating a future date
- Calculating the age of a student as of a certain date
- Creating a table view of a worksheet
- · Quick counts of column data
- Excel Dashboard Reference Guide
- Keyboard Shortcuts



Proper and Days Functions

- Need to change student names from all upper case to "Proper" case?
 - Insert additional column(s) next to the names
 - In cell D2, type =PROPER(B2)
 - In cell E2, type =PROPER(C2)
 - HARRY POTTER should now be Harry Potter
- How do you calculate how many days are between two dates (includes first and last days)?
 - G2 = Beginning of the school year (8/17/16)
 - H2 = End/Withdraw Date (2/1/17)
 - In cell I2, type =DAYS(H2,G2+1)
 - The total number of calendar days will populate.
 - Drag the result down the column to fill in the rest of the fields.



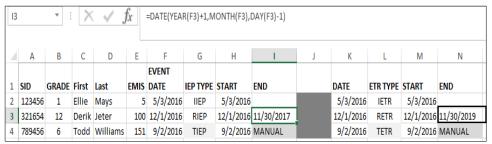




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Date Function

- Find the end date for an IEP, it is 1 year minus 1 day from the Event date
 - In cell I3, type =DATE(YEAR(F3)+1,MONTH(F3),DAY(F3)-1)
- For an ETR, it is 3 years minus 1 day from the Event date
 - In cell N3, type =DATE(YEAR(K3)+3,MONTH(K3),DAY(K3)-1)
- TIEP and TETR have to be entered manually since the Event Date is the Adoption Date



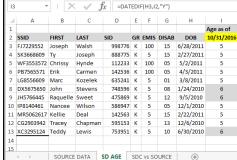


Dated If Function

Want to get a head start on your 5 & 6 year olds for Federal Child Count? To help you determine a students age as of a certain date you will find the formula listed below as a helpful addition to your

Source Data

- Known Data:
 - Date of Birth
 - Age as of 10/31/16
 - Disability = Yes
 - Grade = Kindergarten
- In cell I3, type =DATEDIF(H3,\$I\$2,"Y")

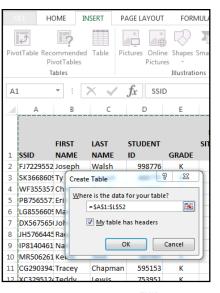




Tables

Have a large amount of data that you would like to see as a table?

- Open your worksheet and select INSERT > **TABLE**
- The range of data to be included in the table will auto-populate
- Click OK
- Your worksheet will now be in a Table format
- You can select various types by going to TABLE TOOLS > DESIGN > TABLE STYLES.





Tables, cont'd

Want to change the table back to a worksheet with no filters but keep the style of the table?

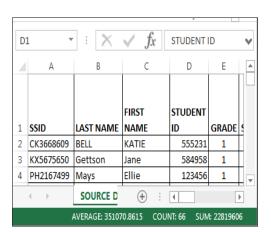
- Select TABLE TOOLS > DESIGN > Tools
 > Convert to Range
- When converting back to a worksheet a pop-up will appear asking if you want to convert the table to a normal range
- Select YES
- You'll notice the filters are gone, but the table style remains.

1	А	В	С	D	Е
1	SSID	FIRST NAME	LAST NAME	STUDENT ID	GRADE
2	FJ7229552	Joseph	Walsh	998776	K
3	SK3668609	Ту	Joseph	888775	K
4	WF355357	Chrissy	Hynde	112233	K
5	PB756557	Erik	Carmen	142536	K
6	LG8556609	Marc	Kozelek	635241	K
7	DX5675650	John	Stevens	748596	K
8	JH5766445	Raquelle	Sweet	475869	K
9	IP8140461	Nancee	Wilson	586947	K
10	MR506261	Kellie	Deal	142563	K
11	CC300304	Tracov	Chanman	505150	V



Quick Calculations

- Want a quick AVERAGE, COUNT, or SUM of a column?
 - Highlight the column that you would like this data on
 - Look in the bottom right corner of the worksheet and the AVERAGE, COUNT, and/or SUM will appear
 - AVERAGE is the average of the selected cells
 - COUNT is the number of selected cells that contain data
 - SUM is the sum of the selected cells
- To add additional settings to the Status Bar, right click anywhere in the bar and check or un-check what you would like to see





Other Tools for Your EMIS – Excel Toolbox

Keyboard Shortcuts								
Open Workbook	<ctrl></ctrl>	+	<0>	To Cell A1	<ctrl></ctrl>	+	<home></home>	
Create New Workbook	<ctrl></ctrl>	+	< N >	To Last Cell	<ctrl></ctrl>	+	<end></end>	
Save	<ctrl></ctrl>	+	<s></s>	Cut	<ctrl></ctrl>	+	< X >	
Preview and Print	<ctrl></ctrl>	+	< P >	Сору	<ctrl></ctrl>	+	< C >	
Close Workbook	<ctrl></ctrl>	+	< W >	Paste	<ctrl></ctrl>	+	< V >	
Right One Cell	<tab></tab>			Undo	<ctrl></ctrl>	+	<z></z>	
Left One Cell	<shift></shift>	+	<tab></tab>	Redo	<ctrl></ctrl>	+	< Y >	
Up One Cell	<shift></shift>	+	Enter	Find	<ctrl></ctrl>	+	< F >	
Select All	<ctrl></ctrl>	+	< A >	Replace	<ctrl></ctrl>	+	< H >	
Select Entire Row	<shift></shift>	+	<space></space>	Bold	<ctrl></ctrl>	+	< B >	
Select entire column	<ctrl></ctrl>	+	<space></space>	Italics	<ctrl></ctrl>	+	< >	
Fill Right	<ctrl></ctrl>	+	< R >	Underline	<ctrl></ctrl>	+	< U >	



Summary

- Creating an all in one source data file can be invaluable when analyzing data
- Using shortcuts will decrease time spent retyping information that is already there or is easily calculated
- Using the new skills you have learned will reinforce your knowledge and will make it easier to continue learning more Excel



Resources

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



Questions?

