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

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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

Excel Tabs and the Quick Access Toolbar

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Excel Tab Review

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

Excel Tab Review

FILE

- Info
- New
- Open
- Save
- Save As
- Print

Info

Protect Workbook
Control what types of changes people c

Inspect Workbook
Before publishing this file, be aware that
- Document properties, printer path, path
- Content that people with disabilitie

Versions
There are no previous versions of th

Browser View Options
Pick what users can see when this workt

Frequently Used Tools for EMIS

HOME
Fill color
Text Color
Wrap Text
Conditional Formatting
Sort & Filter

DATA
Sort
Filter
Text to Columns

VIEW
Page Break Preview
Zoom
Arrange all
Freeze Panes

INSERT
Pivot Table
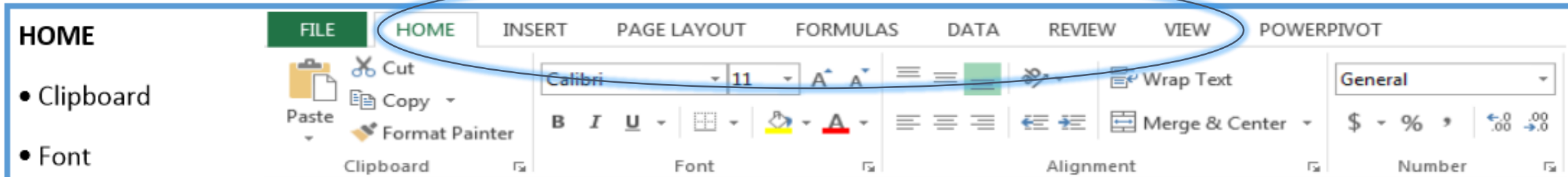Text Box

FORMULAS
Insert Function
AutoSum

PAGE LAYOUT
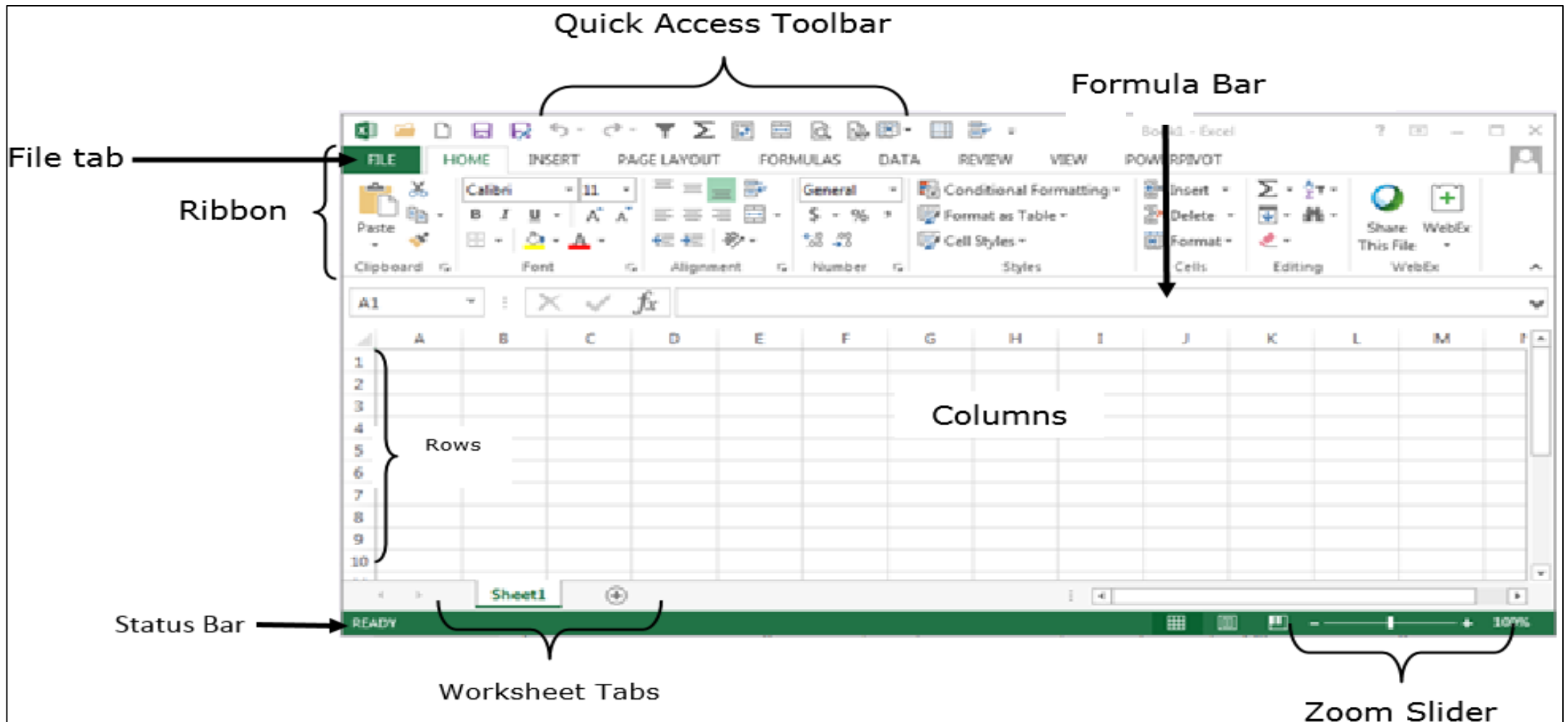Themes
Orientation

HOME

- Clipboard
- Font

| FILE | HOME | INSERT | PAGE LAYOUT | FORMULAS | DATA | REVIEW | VIEW | POWERPIVOT |

Calibri 11 A A

B I U
Paste
Cut
Copy
Format Painter

Wrap Text
Merge & Center

General
$ %

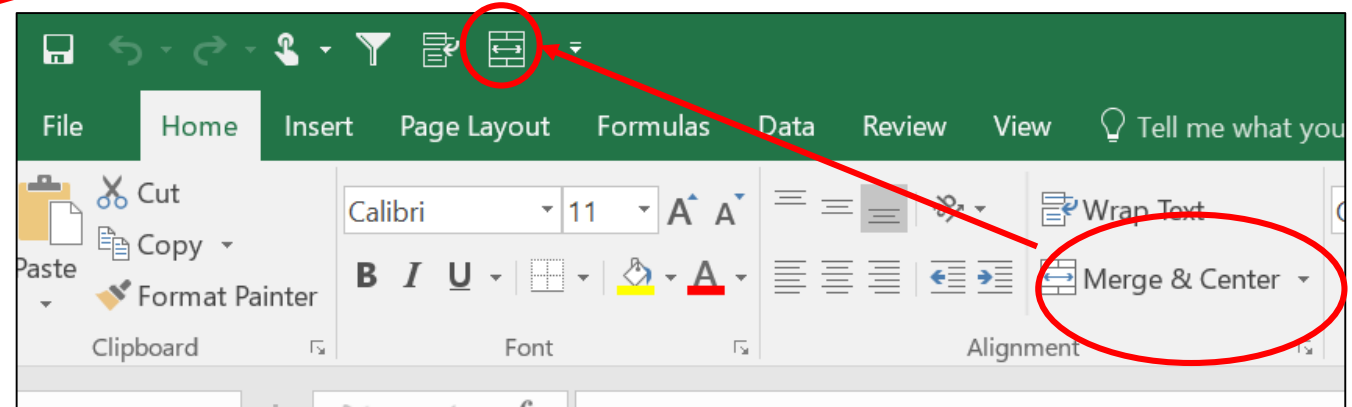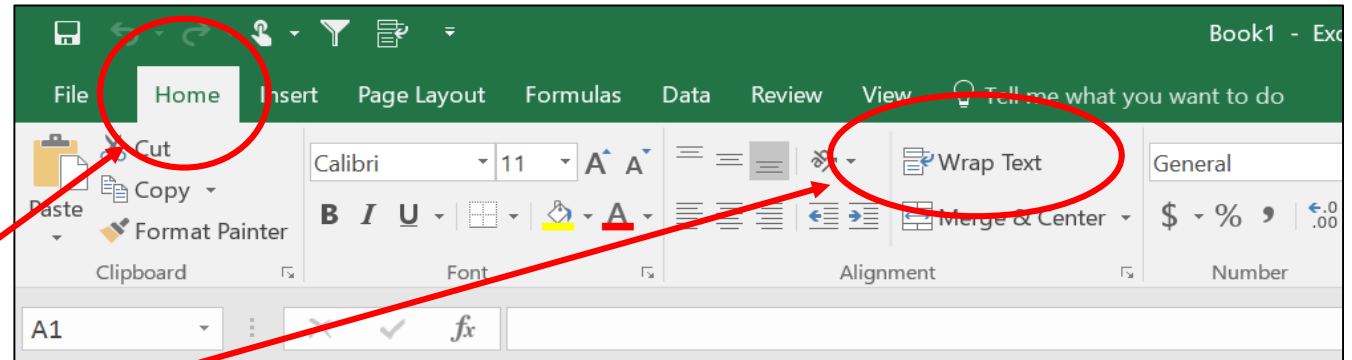Clipboard   Font   Alignment   Number

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Parts of a Worksheet Review

Quick Access Toolbar

How to add a frequently used tool to your Quick Access Toolbar

1. Select a tab that contains the tool

2. Right click on the icon

3. In the pop-up select Add to Quick Access Toolbar

4. The tool's icon will appear in the Quick Access Toolbar

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

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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-in-one 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	How Received	Homeless Status
First Name	Sent Reason	Disadvantgement
State Student ID	District Relationship	Limited English
EMIS ID	Percent of Time	Disability Condition
Date of Birth	District of Residence	Attendance Pattern
Gender	Withdraw Reason	MOA IRN
Building IRN	Effective Start Date	Accountability IRN
Grade Level	Effective End Date	Fiscal Year Began 9th
Grade Next Year	Tuition Type	Diagnostic Results

Other Data Sources

Online Reporting System

Data Collector

SIFWorks® VRF® Data Collector

📄 Student_Discipline_Record_(GD).csv	4
📄 Student_Gifted_Education_Record_(GG).csv	17
📄 Student_Missing_Override_Record_(FC).csv	2
📄 Student_Missing_Report.csv	
📄 Student_Program_Record_(GQ).csv	73
📄 Student_Race_Detail_Record_(GJ).csv	22
📄 Student_Special_Education_Graduation_Requirement_Record_(FE).csv	26

Midyear Student Collection (FY17)

Collection required for all Traditional Districts, JVSDs, ESCs, and State Supported Schools. Source file(s) for GI, FS, FD, FB, FN, GD, GG, GE, FE, FC, FL, GJ, and GQ student record types, labeled with the S reporting period, must be uploaded in EMIS manual format through the Data Collector Data Sources tab. The DN record is also required to be reported in this collection request as well, although there are a limited set of options required. This collection request is for the data for school funding, Federal reporting, and other required ODE reporting.

Submissions:	January 05, 2017 - April 28, 2017
Expiration Date:	April 28, 2017 (in 46 days)
Collection Request:	3
Status:	The collection was submitted March 10, 2017 at 03:53:48 PM by Myers.
Validation Status:	Level 1 Validation
Validation Status:	Level 2 Validation
Submission Status:	Processing Completed (March 10, 2017 at 03:53:04 PM)
Submission Number:	13 (attempt 1)
Actions:	View Submission Results
	Review
	Start Collection
	Add New Scheduled Collection
	Set Default Collection properties

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Secure Data Center

Secure Data Warehouse > **Reports Home**

Reports Home

Local Report Card
Documents depicting your district/school preliminary Local Report Card and Annual Yearly Progress results, based on the most current EMIS data.

Reports for Analysis
This folder contains reports for research and analysis. They are generally grids of data that can be manipulated, including sorting, rearranging rows and columns, and drill-down operations.

- Achievement data

- K-3 Literacy data

- Graduation data

- Prep for Success data

- Special education data

- Gifted data

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Secure Data Center, cont'd

Use the SDC export option
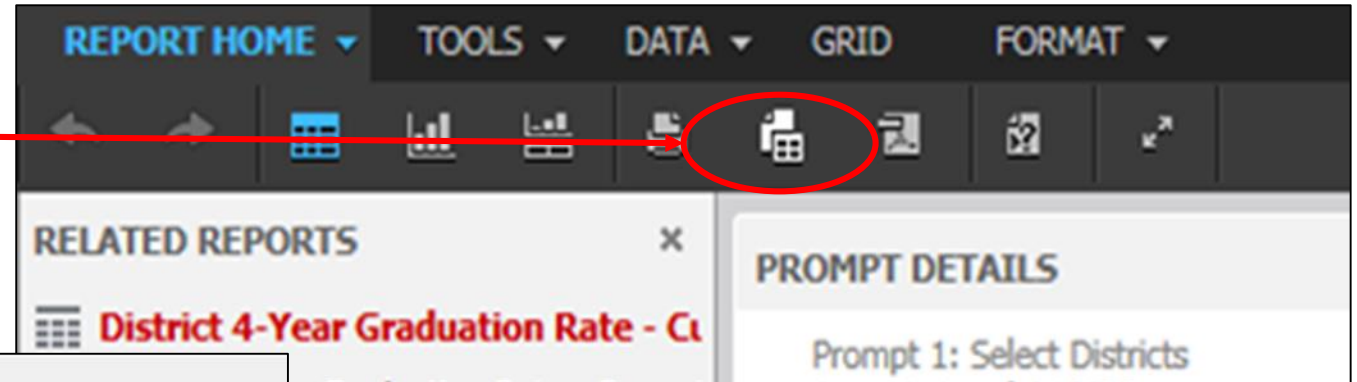
The SDC export option allows multiple export formats

ODDEX SCR Export

ODDEX export will generate a TXT file. From the TXT file, Select All then copy the data from the TXT file

In Cell A1, paste the data from the TXT file

Combined Source Data File Example

- Source Data File – 12th Grade Students
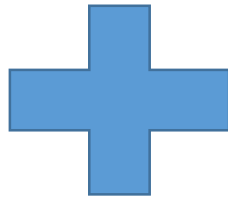
SSID	FIRST NAME	LAST NAME	STUDENT ID	GRADE	DISABILITY CONDITION
KQ3120909	ETHAN	THOMAS	123467	12	12
PQ9733522	OLIVIA	WILLIAMS	123458	12	*
IX6825340	LIAM	JONES	123459	12	*
IX9047510	OLIVER	WALKER	123478	12	*
IY8586474	EMMA	SMITH	12345	12	*
JT8837916	SOPHIA	BROWN	123460	12	15
JN5602659	AVA	MILLER	123462	12	*
PP7370386	WILLIAM	TAYLOR	123465	12	10
JE5216291	ABIGAIL	JACKSON	123468	12	10

- Special_Education_Graduati on_Requirement_(FE) – Assessment Exemption preview/review file

DISABILITY CONDITION	OGT - R	OGT - W
10	Y	N
15	Y	Y
12	Y	Y
10	Y	Y

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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	DISABILITY CONDITION	OGT - R	OGT - W	OGT - M	OGT - S	OGT - C
KQ3120909	ETHAN	THOMAS	123467	12	12	Y	N	N	Y	Y
JT8837916	SOPHIA	BROWN	123460	12	15	Y	N	Y	N	Y
PP7370386	WILLIAM	TAYLOR	123465	12	10	Y	N	Y	Y	Y
JE5216291	ABIGAIL	JACKSON	123468	12	10	Y	N	Y	Y	N
UT5745888	Derik	Jeter	321654	12	13	Y	N	N	Y	Y

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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

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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

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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?

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V-Lookup Exercise

Be sure to sort your SSID's alphabetically before beginning the Vlookup process.

V-Lookup Exercise Steps

1. 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 <u>Source Data</u>
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**

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**, Highlight area that you want the LOOKUP to look at then press F4 to make the range absolute

   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

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V-Lookup Exercise Result

In this example, your final result in the Function Argument should show the student's Last Name after the " = " sign.

You will also notice that the SD1685794 does not have a match. This means the SSID is not in your source data, so you will want to investigate who the SSID belongs to.

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

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Conditional Formatting Exercise

REMINDER

Each set of data being compared should **not** have duplicates within the main data set.

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?

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Conditional Formatting Exercise

	A	B	C	D	E	F
1	SSID	FIRST NAME	LAST NAME	STUDENT ID	GRADE	EMIS 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					
16	KO1739256					
17	JS7547388					
18	KP6701486					
19	LK5757368					
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?

Secure Data Center File - Copy and Pasted data

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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

In order to have data populate in the Recommended PivotTable, you must have a group of data selected.

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

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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

	A	B	C	D	E	F	G	H
1								
2								
3	Count of LAST	Column Labels						
4	Row Labels	I		M	W	Grand Total		
5	10				1	1		
6	11			1 2	8	11		
7	12			1	14	15		
8	Grand Total			1 3	23	27		
9								
10								
11								
12								
13								
14								
15								
16								
17								

CYO RECOMMEND ... ⊕

PivotTable Fields

Choose fields to add to report:

☐ FIRST
☑ LAST
☐ SID

Drag fields between areas below:

▼ FILTERS

Ⅲ COLUMNS
ETHNICITY ▼

≡ ROWS
GRADE ▼

Σ VALUES
Count of LAST ▼

☐ Defer Layout Update   UPDATE

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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?

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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

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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.

D2   fx   =PROPER(B2)

	A	B	C	D	E	F	G	H
1	SSID	FIRST	LAST	First	Last	SID	FS Start Date	End / Withdraw Date
2	CJ7229552	HARRY	POTTER	Harry	Potter	555649	8/17/2016	2/1/2017
3	CK3668609	KATIE	BELL	Katie	Bell	555231	8/17/2016	2/1/2017
4	EF3553572	AMELIA	BONES	Amelia	Bones	555899	8/17/2016	2/1/2017
5	HB7565571	LAVENDAR	BROWN	Lavenda	Brown	555748	12/1/2016	2/1/2017
6	IG8556609	ARGUS	FILCH	Argus	Filch	555694	10/9/2016	2/1/2017

2   fx   =DAYS(H2,G2+1)

A	B	C	D	E	F	G	H	I
SSID	FIRST	LAST	First	Last	SID	FS Start Date	End / Withdraw Date	Calendar Days
CJ7229552	HARRY	POTTER	Harry	Potter	555649	8/17/2016	2/1/2017	167
CK3668609	KATIE	BELL	Katie	Bell	555231	8/17/2016	2/1/2017	
EF3553572	AMELIA	BONES	Amelia	Bones	555899	8/17/2016	2/1/2017	
HB7565571	LAVENDAR	BROWN	Lavenda	Brown	555748	12/1/2016	2/1/2017	
IG8556609	ARGUS	FILCH	Argus	Filch	555694	10/9/2016	2/1/2017	

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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

| I3 | ▼ | ⋮ | ✕ ✓ ƒx | =DATE(YEAR(F3)+1,MONTH(F3),DAY(F3)-1) | | | | | | | | | |

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	SID	GRADE	First	Last	EMIS	EVENT DATE	IEP TYPE	START	END		DATE	ETR TYPE	START	END
2	123456	1	Ellie	Mays	5	5/3/2016	IIEP	5/3/2016			5/3/2016	IETR	5/3/2016	
3	321654	12	Derik	Jeter	100	12/1/2016	RIEP	12/1/2016	11/30/2017		12/1/2016	RETR	12/1/2016	11/30/2019
4	789456	6	Todd	Williams	151	9/2/2016	TIEP	9/2/2016	MANUAL		9/2/2016	TETR	9/2/2016	MANUAL

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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,I2,"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**.
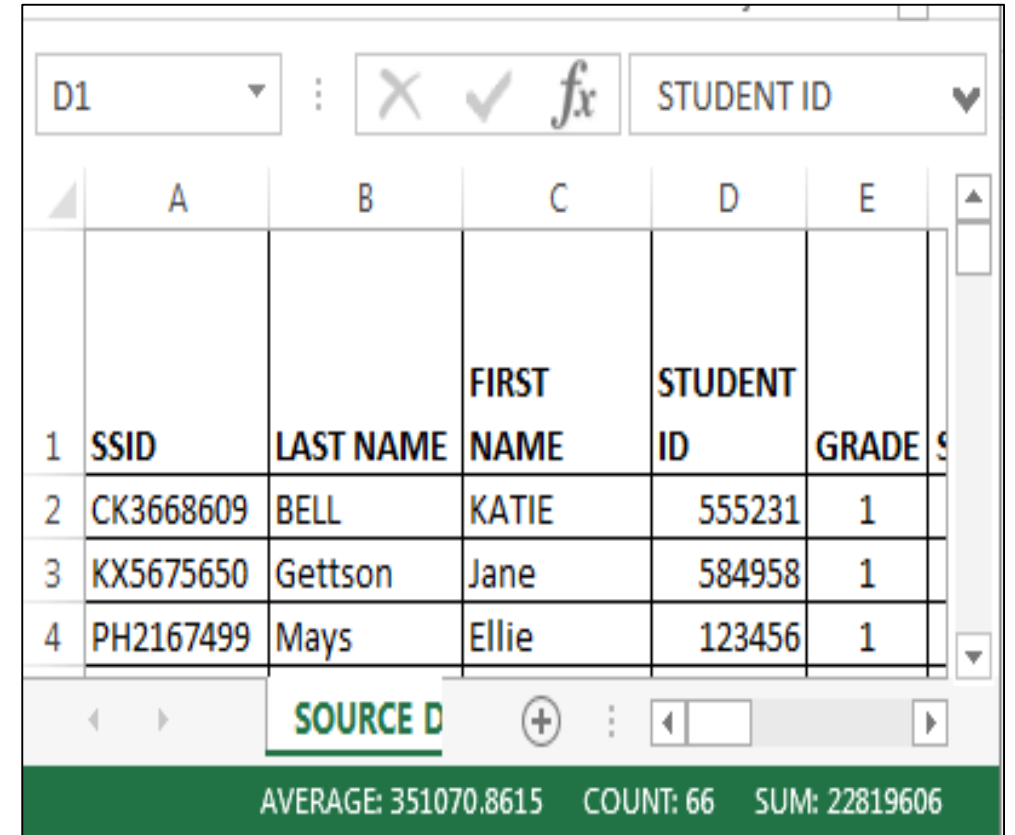
Tables, cont'd

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.

	A	B	C	D	E
1	SSID	FIRST NAME	LAST NAME	STUDENT ID	GRADE
2	FJ7229552	Joseph	Walsh	998776	K
3	SK366860S	Ty	Joseph	888775	K
4	WF355357	Chrissy	Hynde	112233	K
5	PB756557:	Erik	Carmen	142536	K
6	LG855660S	Marc	Kozelek	635241	K
7	DX567565(	John	Stevens	748596	K
8	JH5766445	Raquelle	Sweet	475869	K
9	IP8140461	Nancee	Wilson	586947	K
10	MR506261	Kellie	Deal	142563	K
11	CG290294'	Tracey	Chapman	595152	K

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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>	+	< O >	To Cell A1	<Ctrl>	+	<Home>
Create New Workbook	<Ctrl>	+	< N >	To Last Cell	<Ctrl>	+	<End>
Save	<Ctrl>	+	< S >	Cut	<Ctrl>	+	< X >
Preview and Print	<Ctrl>	+	< P >	Copy	<Ctrl>	+	< C >
Close Workbook	<Ctrl>	+	< W >	Paste	<Ctrl>	+	< V >
Right One Cell	<Tab>			Undo	<Ctrl>	+	< Z >
Left One Cell	<Shift>	+	<Tab>	Redo	<Ctrl>	+	< Y >
Up One Cell	<Shift>	+	Enter	Find	<Ctrl>	+	< F >
Select All	<Ctrl>	+	< A >	Replace	<Ctrl>	+	< H >
Select Entire Row	<Shift>	+	<Space>	Bold	<Ctrl>	+	< B >
Select entire column	<Ctrl>	+	<Space>	Italics	<Ctrl>	+	< I >
Fill Right	<Ctrl>	+	< R >	Underline	<Ctrl>	+	< U >

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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

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Resources

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

Questions?

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