

How to Make the Most of Excel Spreadsheets

Analyzing data is often easier when it's in an Excel spreadsheet rather than a PDF—for example, you can **filter** to view just a particular grade, **sort** to view which students need the most attention, or **hide** data that you don't want to see. And that's just a start.

This guide will cover these skills and more using the Comprehensive Student Data Roster, one of the most powerful yet potentially daunting reports available at OUSD. Read on to become a pro at Filtering, Sorting, Freezing/Unfreezing, Hiding/Unhiding, Inserting/Deleting, Printing, and, for users eager to do even more analysis, Conditional Formatting and Pivot Tables.

Throughout this guide, we will use the following scenario: A school leader wants to understand Grade 9 attendance better so she can do something to improve attendance. How can she use the CSDR and the power of Excel to make the most of the data?

Begin by downloading the CSDR from your school's Google Drive. Go to the Protected Student Level Data folder and then the Comprehensive Student Data Roster folder, as shown below:

Internal Data Reports > Frick Middle School > Protected Student Level Data > Comprehensive Student Data Roster

After you have downloaded the file, open it in Excel. This tutorial is based on MS Excel 2007. It is not suitable for Chromebooks, which have Google Spreadsheets.

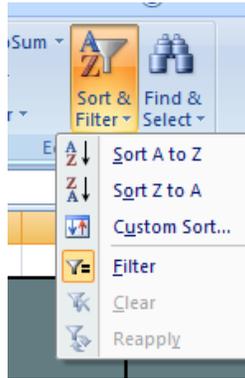
1. Filtering

Sometimes you just want to look at a subset of the data in a spreadsheet. In our example, we may want to begin by asking how many and which students in Grade 9 have attendance rates below 90%.

This is known as filtering. Begin by locating the row that labels the columns. In the CSDR, it's row 4—that's where you see the column titles like Name, ID, and Grade. Go ahead and select row 4 by clicking on the number 4 all the way on the left.

OPS Site Code	School	Teacher Course	Name	ID	School	Teacher / Advisor	Summer Site / Hub	Grade	Ethnicity	Ethnicity (detail)	Gender	Birth Date	Original OUSD Enter Year	School Enter Date	Disability (Special Ed)	Disability Category	GATE	Home Lang	English Fluency	Fluency Group (August 2014)	EL Years	Birth Country	Attendance Rate	Attendance Rate
100	Sample School		Aaaaaa	123456				11	NotSpec	NotSpec	F	1997-11-11	2003	2014-08-25				Engl	EO					
100	Sample School		Bbbbbb	123456				9	NatAmer	NatAmer	M	1999-12-30	2014	2014-08-25				Engl	EO					
100	Sample School		Ccccccc	123456				10	Filipino	Filipino	M	1999-06-18	2004	2014-08-25				Engl	EO				98.9%	
100	Sample School		Aaaaaa	123456	Claremont	Joseph Williams		9	AfrAmer	AfrAmer	F	2000-02-14	2013	2014-08-25				Engl	EO	EO			98.3%	
100	Sample School		Bbbbbb	123456	Oakland	Joel Wing		10	White	White	M	1999-04-11	2004	2013-08-26			Y	Engl	EO	EO				
100	Sample School		Ccccccc	123456				12	Latino	Latino	M	1997-10-20	2005	2011-08-29			Y	Span	RFEP	RFEP-LTP		US	100.0%	
100	Sample School		Bbbbbb	123456	Edna Brex	Scott Corwin		9	White	White	M	2000-05-19	2005	2014-08-25			Y	Engl	EO	EO			98.3%	
100	Sample School		Ccccccc	123456	Oakland	CARLOS BOVER		12	Asian	Chinese	M	1996-05-14	2001	2011-08-24	Y	ED		Cant	RFEP	RFEP-LTP		US	100.0%	
100	Sample School		Aaaaaa	123456	Oakland	Marsha Rhynes		12	AfrAmer	AfrAmer	M	1996-01-03	2001	2011-08-24	Y	SLD		Engl	EO	EO			95.0%	
100	Sample School		Bbbbbb	123456	Oakland	Joyce Snow		12	Latino	Latino	F	1997-07-21	2002	2011-08-29				Engl	EO	EO			100.0%	
100	Sample School		Ccccccc	123456	Oakland	Clarence Harris		11	White	White	F	1998-01-28	2003	2012-08-27			Y	Engl	EO	EO			99.4%	
100	Sample School		Aaaaaa	123456	Monterey	Adrian Contonente		9	White	White	F	2000-09-24	2005	2014-08-25				Engl	EO	EO				
100	Sample School		Bbbbbb	123456	Oakland	Joyce Snow		12	AfrAmer	AfrAmer	M	1998-06-07	2012	2013-02-14				Engl	EO	EO				
100	Sample School		Ccccccc	123456	Oakland	Dennis Javelo		12	Latino	Latino	M	1997-05-20	2002	2011-08-29				Span	IFEP	IFEP		MX	96.7%	
100	Sample School		Aaaaaa	123456	Oakland	CARLOS BOVER		12	Asian	Chinese	F	1997-02-15	2002	2013-08-26			Y	Cant	RFEP	RFEP-LTP		US		

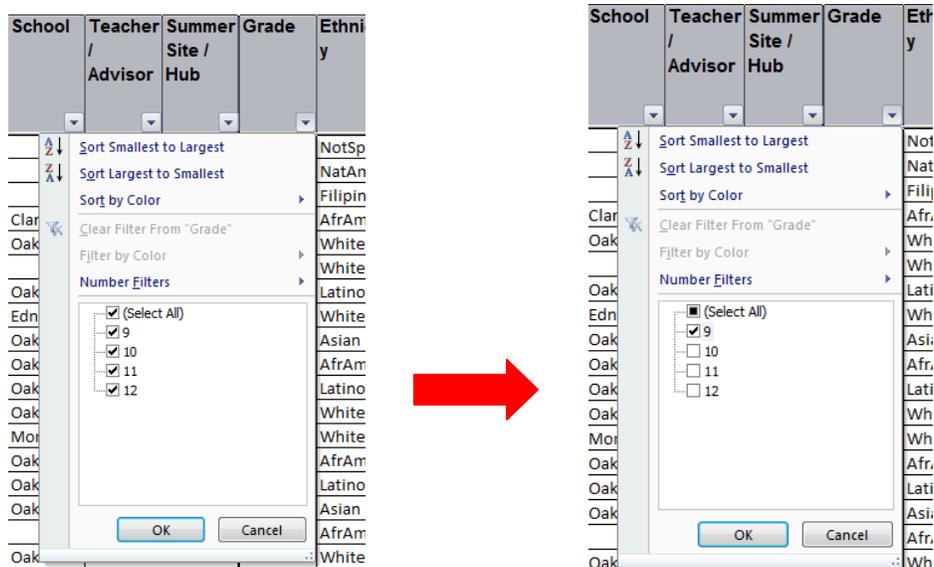
Once you see that the row has been highlighted, go to the top right corner of the Home tab and click on the Sort & Filter button. When you click on the button, a menu will come up with options. Click on the Filter option.



Take a close look at row 4—you should now see small drop-down buttons with a down arrow in each cell, as shown in this picture:

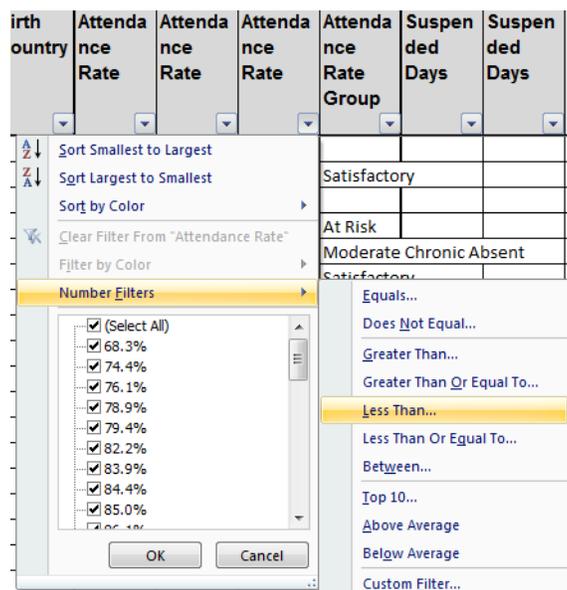
2														
3	2014-15		2014-15		2014-15		2013-14							
4	OPS Site Code	School	Teacher	Course	Name	ID	School	Teacher / Advisor	Summer Site / Hub	Grade	Ethnicity	Ethnicity (detail)	Gender	Birth Date
6	100	Sample School			Aaaaaaa	123456				11	NotSpec	NotSpec	F	1997-11-11
7	100	Sample School			Bbbbbbb	123456				9	NatAmer	NatAmer	M	1999-12-30
8	100	Sample School			Cccccccc	123456				10	Filipino	Filipino	M	1999-06-18

Let's start by filtering so we only see students in Grade 9. Click on the arrow button on the Grade cell. You'll see a menu come up with some options. Excel shows you all the values that the Grade field contains. Our sample school is a high school, so the numbers 9, 10, 11 and 12 appear. Go ahead and unselect 10, 11 and 12. Doing so will leave you with just Grade 9 students. Click OK.



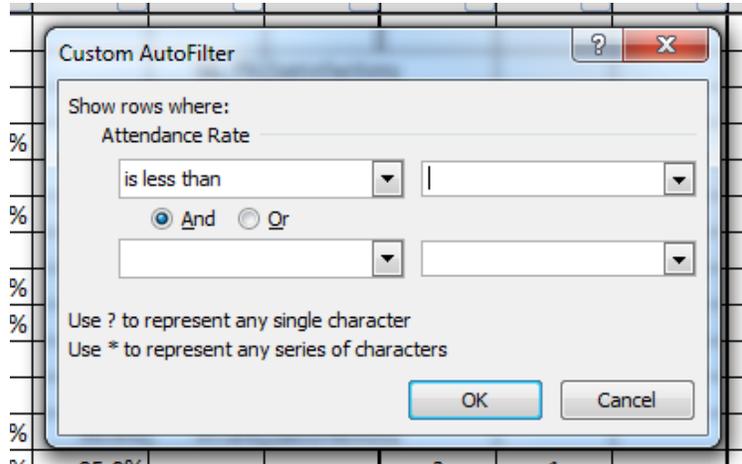
Review the data. You should see only students in Grade 9. We're now halfway to our goal of just seeing 9th graders with attendance rates below 90%.

To complete the next step of filtering to just students with attendance rates below 90%, go over to the Attendance Rate column. Click on the arrow button to bring up the sorting and filtering options as before. This time, because attendance rates take on many different values (unlike grades, which only take on a few values), we will select the Number Filters option. Click on that.

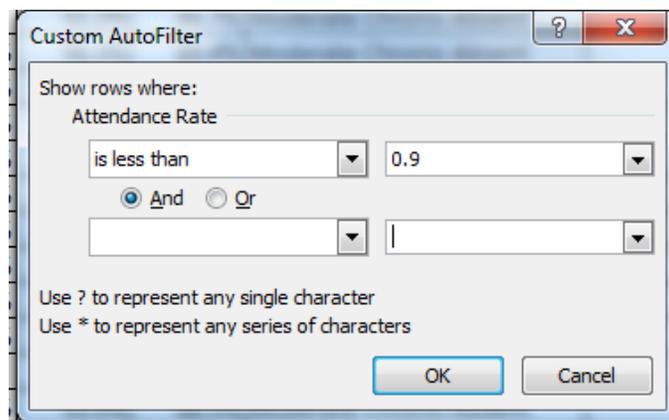


Take a look at the options that now appear: you could select students with attendance rates equal or not equal to a number, greater than or less than a number, between two numbers, and more. In our case, we want to select attendance rates less than 90% so click on Less than...

The following window will pop up:



Enter the value 0.9 into the blank space on the top right. Why not 90? Attendance rates are percentages so we have to use a decimal so Excel understands. Now click OK.

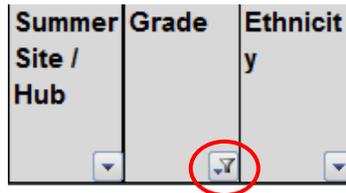


At our sample school, there are 31 students in Grade 9 who had attendance rates lower than 90%. An easy way to tell how many students there are without having to count the rows is to look to the bottom left-hand corner of the spreadsheet:

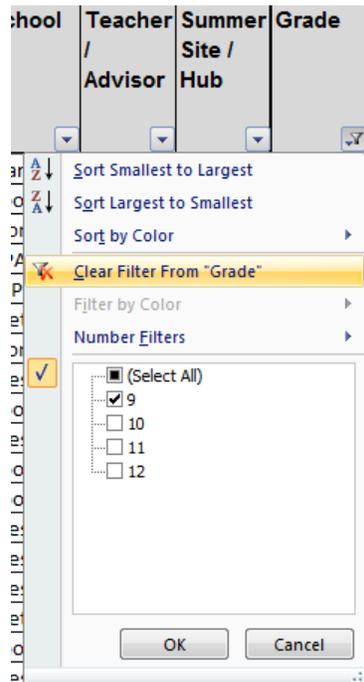


This tells us that out of 2115 students in our school, 31 are 9th graders with attendance rates below 90%.

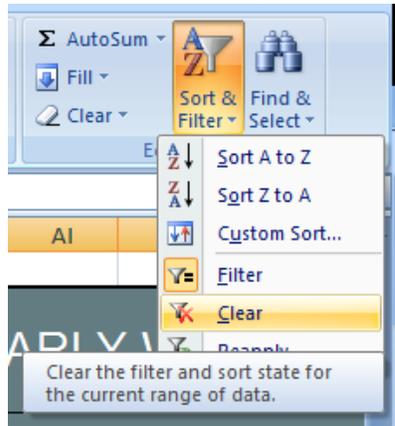
If we want to unfilter, we just repeat the same steps. You'll know there's a filter on a column because you'll see the following funnel symbol, as on Grade:



Click on the button and select "Clear filter from "Grade"" to remove the 9th grade only filter.



Remember that we still have a filter on Attendance. To remove ALL the filters in a spreadsheet, go to the Sort & Filter button at the top right hand corner, under the Home tab, and select “Clear.”

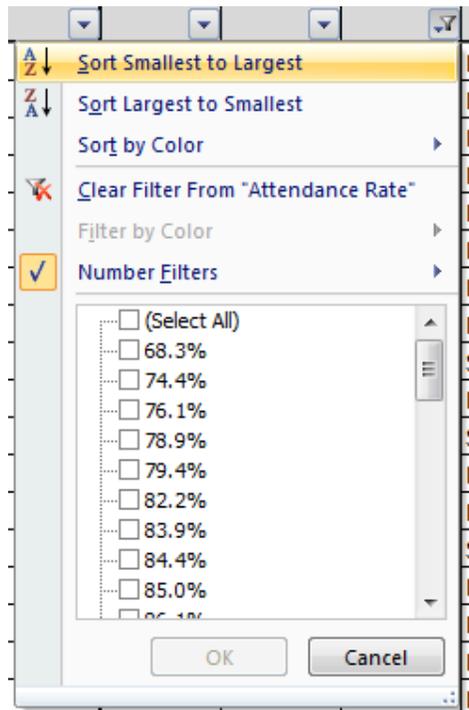


2. Sorting

Let's continue with the same example, so practice putting your filters back on.

Though we could look at the 31 students one by one to identify which ones need the most attention, we can find out which ones had the lowest attendance rates by sorting. To sort (also known as ranking or ordering) students according to some rule (for example, largest to smallest or alphabetically), click on the same arrow button we used to filter on the column name you're interested in.

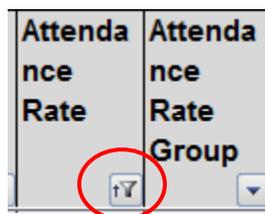
Since we want to see students with the lowest attendance rates at the top, click on Sort Smallest to Largest.



Once we click on that button, we see that at the top of the list of 31 students is a student with an attendance rate of 68.3%--the lowest attendance rate among all 9th graders.

2014-15											2011-12	2012-13	2013-14		2011-12	2012-13	2013-14	
Gender	Birth Date	Original OUSD Enter Year	School Enter Date	Disability (Special Ed)	Disability Category	GATE	Home Lang	English Fluency	Fluency Group (August 2014)	EL Years	Birth Country	Attendance Rate	Attendance Rate	Attendance Rate	Attendance Rate Group	Suspended Days	Suspended Days	Suspended Days
M	2000-05-26	2005	2014-08-21	Y	SLD		Engl	EO	EO				96.1%	68.3%	Severe Chronic Absent			5
M	1999-12-07	2006	2014-08-25				Engl	EO	EO			96.1%	91.1%	74.4%	Severe Chronic Absent			
M	1999-11-06	2013	2014-08-21	Y	SLI		Span	EL	EL-LTEL	9.0	MX		97.7%	76.1%	Severe Chronic Absent			
M	2000-10-22	2008	2014-08-25				Engl	EO	EO			100.0%	94.4%	78.9%	Severe Chronic Absent	5		9

You'll know if a column is being sorted if you see an arrow symbol on the filter/sort button on that column. In this example, because the Attendance Rate is both sorted and filtered, we see the funnel *and* the arrow appear.



To remove all sorting, follow the same steps as for removing all filtering. Go to the Sort & Filter button at the top, under the Home tab, and select "Clear."

3. Freezing Panes

The Comprehensive Student Data Roster has several columns of data. As we scroll right to look at all of the data available on these students, we may lose track of their names and other information we want to be able to see next to other data.

For example, let's say we want to look at academic outcomes (found all the way on the right of the spreadsheet) for our 31 9th grade students with attendance rates below 90%, but we want to be able to see their names on the left-hand side. As we scroll down the list, we also want to continue to see the names of the columns. Without freezing panes, we might end up viewing something like this:

N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM		
18	2000-05-28	2005	2014-08-21	Y	SLD		Engl	EO	EO			96.1%	68.3%	Severe Chronic Absent			5	2	68%		ENGLISH 8	F	Warning	MATH 8			
211	1999-12-07	2006	2014-08-25				Engl	EO	EO			96.1%	91.1%	Severe Chronic Absent				1	74%		ENGLISH 8	B-		MATH 8			
219	1999-11-06	2013	2014-08-21	Y	SLI		Span	EL	EL-LTEL	9.0	MX		97.7%	Severe Chronic Absent				3	76%		ENGLISH 8	F	Warning	MATH 8			
398	2000-10-23	2008	2014-08-25				Engl	EO	EO			100.0%	94.4%	Severe Chronic Absent			5	9	3	79%	4	ENGLISH 8	NM		MATH 8		
849	2000-09-15	2011	2014-08-25				Engl	EO	EO			87.8%	81.1%	Severe Chronic Absent					2	79%		ENGLISH 8	F	Warning	MATH 8		
904	1999-04-24	2004	2014-08-25				Engl	EO	EO			93.9%	73.9%	Severe Chronic Absent			5		3	79%		ENGLISH 8	F	Warning	MATH 8		
914	2000-08-25	2005	2014-08-21	Y	SLD		Span	EL	EL-LTEL	9.0	US		92.2%	Moderate Chronic Absent							ENGLISH 8	C		MATH 6-8			
916	1999-09-04	2005	2014-08-25				Engl	EO	EO			95.6%	87.2%	Moderate Chronic Absent							ENGLISH 8	C+		MATH 8			
966	1999-06-21	2005	2014-08-21	Y	SLD		Engl	EO	EO			93.3%	91.7%	Moderate			8				VOYAGER	C-		VOYAGER			
982	2000-03-07	2010	2014-08-25				Arab	EL	EL-ATRISK	4.0	US		98.9%	Moderate Chronic Absent							ENGLISH 8	A-		ALGEBRA			
986	2000-05-13	2005	2014-08-25				Engl	EO	EO			97.2%	98.9%	Moderate Chronic Absent							ENGLISH 8	D-		MATH 8			
996	1999-10-27	2012	2014-08-21	Y	OHI		Engl	EO	EO			87.7%	92.8%	Moderate			2	5	6	1		4	ENGLISH 8	C		MATH 8	
1128	2000-09-24	2005	2014-08-25				Engl	EO	EO			92.2%	86.7%	Moderate Chronic Absent							ENGLISH 8	B-		MATH 8			
1135	1999-03-18	2004	2014-08-25				Engl	EO	EO			88.3%	91.7%	Moderate Chronic Absent							ENGLISH 8	C		MATH 8			
1152	1999-03-20	2004	2014-08-25				Span	EL	EL-LTEL	9.0	US		94.4%	Moderate Chronic Absent							ENGLISH 8	B+		MATH 8			
1229	2000-02-11	2005	2014-08-21	Y	SLD		Engl	EO	EO			89.4%	90.6%	Moderate			3		3		ENGLISH 8	D		MATH 8			
1233	2000-02-11	2005	2014-08-25				Engl	EO	EO			95.0%	97.2%	Moderate			1				ENGLISH 8	B-		MATH 8			
1242	1999-02-05	2004	2014-08-21	Y	ID		Engl	EO	EO			92.8%	81.7%	Moderate Chronic Absent			2				ENGLISH 8	A		MATH 6-8			
1324	1999-06-04	2007	2014-08-25				Span	RFEP	RFEP-LTP		MX	93.9%	93.9%	Moderate Chronic Absent					1		ENGLISH 8	D-		MATH 8			
1549	2000-02-04	2005	2014-08-25				Othe	IFEP	IFEP		CA	95.0%	92.2%	Moderate Chronic Absent							ENGLISH 8	A-		MATH 8/A			
1697	2000-08-27	2005	2011-08-21	Y	SLD		Engl	EO	EO			92.8%	93.9%	Moderate Chronic Absent							ENG 6-8 S	D+		MATH 6-8			
1704	2000-11-30	2005	2014-08-25				Engl	EO	EO			86.1%	92.8%	Moderate Chronic Absent					1		ENGLISH 8	D+		MATH 8			
1737	2000-05-24	2005	2014-08-21	Y	SLD		Engl	EO	EO			94.4%	93.9%	Moderate Chronic Absent							ENGLISH 8	B-		MATH 8			
1752	2000-02-08	2007	2014-08-25				Engl	EO	EO			96.1%	93.9%	Moderate Chronic Absent							ENGLISH 8	D-		MATH 8			
1863	2000-01-23	2005	2014-08-25			Y	Engl	EO	EO			97.2%	93.9%	Moderate Chronic Absent							ENGLISH 8	B-		MATH 8/A			
1866	2000-01-21	2011	2014-08-25				Engl	EO	EO			100.0%	99.4%	Moderate Chronic Absent			1				ENGLISH 8	C-		MATH 8			
1877	1999-12-01	2004	2011-11-01	Y	SLD		Engl	EO	EO			97.2%	94.4%	Moderate Chronic Absent			1				ENG 6-8 S	D		MATH 6-8			
1888	2000-08-07	2005	2014-08-25			Y	Span	RFEP	RFEP-LTP		US	97.8%	98.3%	Moderate Chronic Absent							ENGLISH 8	C+		MATH 8			
2007	1999-12-21	2005	2014-08-25				Engl	EO	EO			95.0%	89.4%	Moderate Chronic Absent							ENGLISH 8	C-		MATH 8/A			
2018	1999-10-01	2004	2014-08-25				Engl	EO	EO			97.8%	94.4%	Moderate			5		18	3		4	ENGLISH 8	F	Warning	MATH 8	
2102	1999-12-24	2005	2011-08-21	Y	ED		Engl	EO	EO			94.4%	92.2%	Moderate Chronic Absent							LANG ART	B+		6-7-8 MAT			

How do we know which rows correspond to which students or what the columns are? To fix this, we will freeze the column names and student names so they stay put even when we scroll down or right.

Begin by selecting the first cell **to the right and below** the column and row you want to freeze.

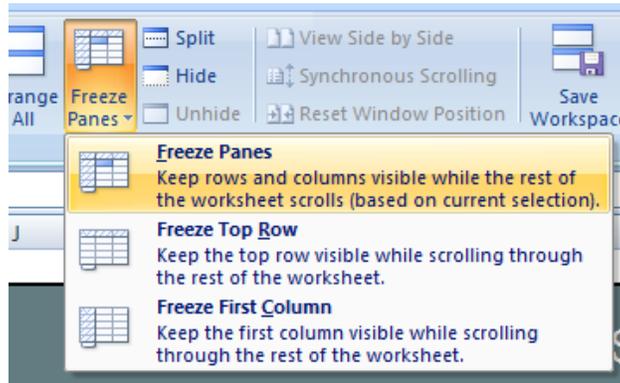
In this case, we want to freeze everything to the left of the Student ID and above the first row of data, so we click on the cell that meets that criteria—the first row with a student ID in it.

	A	B	C	D	E	F	G	H	I
1	CLICK HERE: A Guide to the Comprehensive Student Data Roster								
2	SCHOOL		TEACHER		STUDENT		LAST YEAR		
3	2014-15		2014-15		2014-15		2013-14		
4	OPS Site Code	School	Teacher	Course	Name	ID	School	Teacher / Advisor	Summer Site / Hub
18	100	Sample Sc	Matthew	ENG 1 P	Bbbbbb	123456	Westlake	Neku Pogue	
211	100	Sample Sc	Laura Hur	ENG 1 P	Bbbbbb	123456	Westlake	Molly Rice	
219	100	Sample Sc	Joel Wing	ENG 1 P	Cccccccc	123456	Claremon	Justin Booker	
398	100	Sample Sc	Joel Wing	ENG 1 P	Aaaaaaa	123456	Claremon	Keziah Moss-Sandst	
849	100	Sample Sc	Karina Or	BIOLOGY 9 P	Bbbbbb	123456	Claremon	Kurt Kaakuahiwi	
904	100	Sample Sc	Sadie Skill	BIOLOGY 9 P	Bbbbbb	123456	Westlake	Molly Rice	
914	100	Sample Sc	Jennifer B	ENG 1 SEC	Cccccccc	123456	Westlake	Timothy Redmond	

Now go to the toolbar in Excel and click on the View tab. This tab gives you options for viewing the data in different ways. Click on the Freeze Panes button.



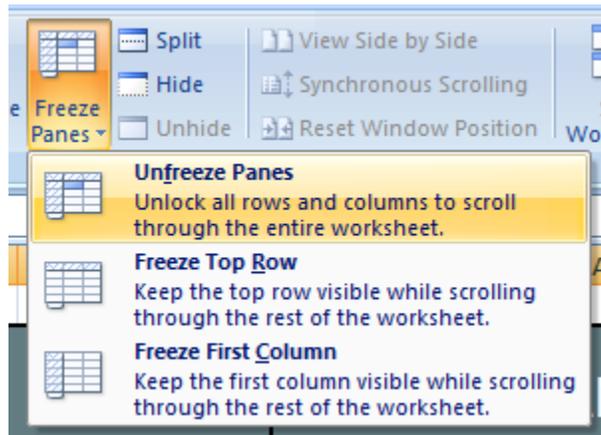
You'll see the following menu come up:



Click on Freeze Panes—this will keep the rows and columns visible while the rest of the worksheet scrolls based on which cell you selected. Compare the spreadsheet to how it looked before—even though we are scrolled to the right and to the bottom, the first four rows and first five columns stay put—because we froze them.

SCHOOL		TEACHER		STUI AND COLLEGE READINESS				SCHOLASTIC READING INVENTORY						PWT										
2014-15		2014-15		201 2013-14				2012-13		FALL 2013		MID-YEAR 2013-14		SPRING 2014		GROWTH		FALL 2013						
OPS Site Code	School	Teacher	Course	Name	Total GPA non-wt (6-12 only)	Academic GPA non-wt (6-12 only)	Credits Attempted	Credits Completed	EAP ELA (STAR 2013)	EAP Math (STAR 2013)	Lexile Grade	Lexile Grade	Lexile Grade	Lexile Grade	Lexile Grade	Fall - MidYear Lexile Grade Growth	MidYear - Spring Lexile Grade Growth	Fall - Spring Lexile Grade Growth	PWT Analysis-Elaboration PL	PWT Claim-Thesis-Opinion PL	PWT Evidence-Source PL	PWT Organization PL	PWT Style-Voice-Conventions F	
986	100	Sample S	Jah Yee W	ENG 1 P	Aaaaaaa			0	0		594	3.5	754	5.5	793	5.5	-2	0	2					
996	100	Sample S	Patricia B	PE	Aaaaaaa			0	0		490	2.5	212	1.5			-1							
1128	100	Sample S	School		Aaaaaaa			0	0		968	8.5	985	8.5	1072	11	0	2.5	2.5					
1135	100	Sample S	Phillip L	ALGEBRA 1 P	Aaaaaaa			0	0		811	6	786	5.5	998	8.5	-0.5	3	2.5					
1152	100	Sample S	Nicholas F	ENG 1 P	Cccccccc			0	0		443	2.5	564	3.5	791	5.5	1	2	3					
1229	100	Sample S	Patricia B	PE	Aaaaaaa			0	0		760	5.5	845	6.5	854	7	1	0.5	1.5					
1233	100	Sample S	Phillip L	ALGEBRA 1 P	Aaaaaaa			0	0		1074	11	1017	9.5	1168	11	-1.5	1.5	0					
1242	100	Sample S	Jennifer B	ENG 1 SEC	Bbbbbbb			0	0		126	1	307	2	183	1	1	-1	0					
1324	100	Sample S	CATHRINE	FRENCH 1 P	Aaaaaaa			0	0		506	3	581	3.5			0.5			Basic	Basic	Basic	Basic	Basic
1549	100	Sample S	Joel W	ENG 1 P	Bbbbbbb			0	0		1189	11	1133	11	1210	11	0	0	0					
1697	100	Sample S	Johanna L	ALGEBRA 1 P	Aaaaaaa			0	0		139	1	233	1.5			0.5							
1704	100	Sample S	Karina O	BIOLOGY 9 P	Aaaaaaa			0	0		918	8	475	2.5	814	6	-5.5	3.5	-2	Proficient	Basic	Basic	Proficient	Basic
1737	100	Sample S	Kathryn R	SPANISH 1 P	Cccccccc			0	0		386	2	564	3.5	537	3	1.5	-0.5	1					
1752	100	Sample S	Darlene Q	PE	Cccccccc			0	0		541	3	708	5	373	2	2	-3	-1					
1863	100	Sample S	Karina O	BIOLOGY 9 P	Aaaaaaa			0	0		1282	11	1208	11	1225	11	0	0	0					
1866	100	Sample S	Nicholas F	ENG 1 P	Aaaaaaa			0	0		767	5.5	840	6.5	939	8	1	1.5	2.5					
1877	100	Sample S	Teacher B	ENG 1 SEC	Aaaaaaa			0	0				299	1.5										
1888	100	Sample S	CATHRINE	FRENCH 1 P	Bbbbbbb			0	0		888	7.5	925	8	542	3	0.5	-5	-4.5					
2007	100	Sample S	Kathryn R	SPANISH 1 P	Aaaaaaa			0	0		1238	11	1262	11	1282	11	0	0	0					
2018	100	Sample S	Phillip L	ALGEBRA 1 P	Cccccccc			0	0		578	3.5			902	8			4.5					
2102	100	Sample S	Timothy B	ALGEBRA 1 S	Cccccccc			0	0						752	5.5								

To unfreeze, repeat the same steps. After clicking on the “Freeze Panes” button, you will now see “Unfreeze Panes” where it once said “Freeze Panes.” Select that option.



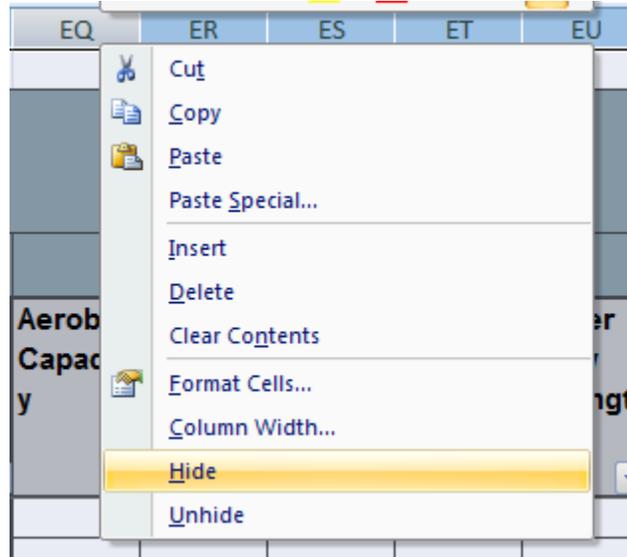
4. Hiding Columns (or Rows)

Even though we have frozen the students’ names, we are still seeing more columns than we wish to see. For example, we are not interested in seeing our Grade 9 chronically absent students’ PFT results for now. We want to focus on just a couple of key academic outcomes to understand how these students are doing in school and the PFT results are cluttering the spreadsheet!

To hide (rather than delete) these columns, begin by selecting all the columns you wish to hide. Click and drag across the column letter names to highlight several columns at once.

	A	B	C	D	E	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX
1	CLICK HERE: A Guide to the Comprehensive Student Data																								
2	SCHOOL					TEACHER					STUDENT					PHYSICAL FITNESS TEST									
3	2014-15		2014-15			2011-12					2012-13					2013-14									
4	OPS Site Code	School	Teacher	Course	Name	Abdominal Strength	Trunk Extension Strength	Upper Body Strength	Flexibility	Healthy Fitness Zone Totals	Aerobic Capacity	Body Composition	Abdominal Strength	Trunk Extension Strength	Upper Body Strength	Flexibility	Healthy Fitness Zone Totals	Aerobic Capacity	Body Composition	Abdominal Strength	Trunk Extension Strength	Upper Body Strength	Flexibility	Healthy Fitness Zone Totals	
986	100	Sample School	Jah Yee W	ENG 1 P	Aaaaaa						Needs Im	Needs Im	Needs Im	Healthy Fi	Healthy Fi	Needs Im	2								
996	100	Sample School	Patricia B	PE	Aaaaaa						Healthy Fi	Needs Im	Healthy Fi	Healthy Fi	Needs Im	Healthy Fi	4								
1128	100	Sample School			Aaaaaa						Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	6								
1135	100	Sample School	Phillip L	ALGEBRA 1 P	Aaaaaa						Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	6								
1152	100	Sample School	Nicholas H	ENG 1 P	Cccccccc						Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	5								
1229	100	Sample School	Patricia B	PE	Aaaaaa																				
1233	100	Sample School	Phillip L	ALGEBRA 1 P	Aaaaaa						Needs Im	Needs Im	Healthy Fi	Healthy Fi	Healthy Fi	Healthy Fi	4								
1242	100	Sample School	Jennifer B	ENG 1 SEC	Bbbbbbb						Partial Pat	Needs Im	Needs Im	Healthy Fi	Partial Pat	Needs Im	1								

While the columns are still highlighted, right click anywhere on the highlighted area. You will see some options come up:

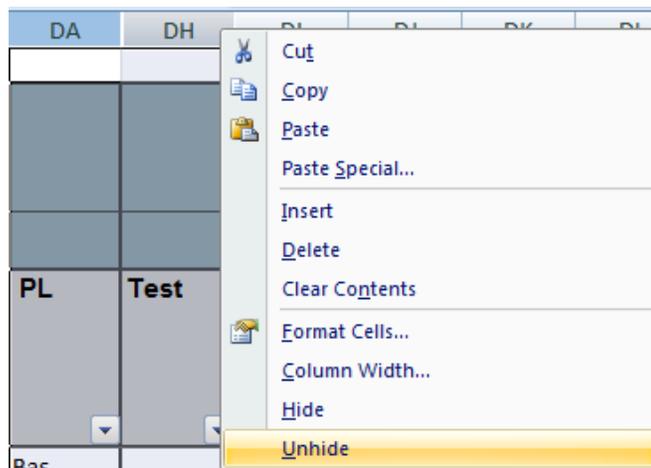


You could select Delete, but we may want to look at the PFT data later. Instead click Hide. You should no longer see the columns you selected.

If you come back to the spreadsheet later, you will notice that some columns are hidden because there will be a gap in the letter sequence of the columns. For example, notice below that the columns skip from DA to DH, meaning columns DB-DG are hidden.



To bring up that data again, right click on the space between the two columns, or highlight a few columns around the hidden area. In this example, I highlight columns DA and DH and then right click. The same menu comes up, but now with a new Unhide option. Click on Unhide.



5. Inserting and Deleting

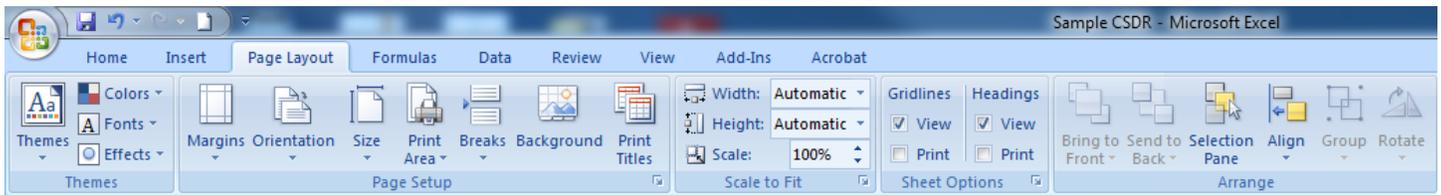
To insert or delete a column or row, follow the same steps as for hiding and unhiding. Right click on where you want to add the column or row (right click on the area that names the columns with letters and the rows with numbers) to bring up the menu shown above. Now click on Insert. A new empty row will come up. To delete, highlight the column(s) or row(s), right click, and click Delete.

Note that you are now altering the spreadsheet. You may want to save a new version!

6. Printing

Printing in Excel is not that intuitive—especially if you want the printout to look a certain way. Let's say you have now modified the spreadsheet so it only includes the key data points you want to focus on—you have hidden all the rest. You also have your filters on Grade and Attendance Rate turned on and you have sorted by Attendance Rate. You're ready to share this with students' teachers so you can discuss these students with them, but when you click Print the output looks messy.

The Page Layout tab will help you make sure the table prints just as you'd like.

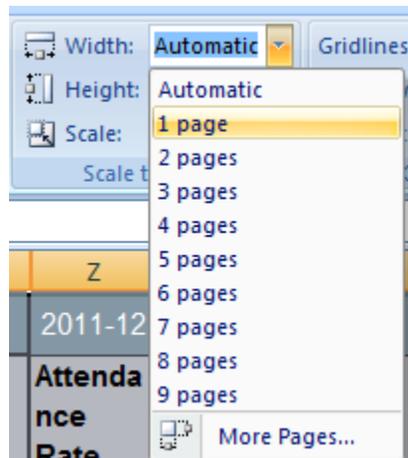


Begin by telling Excel which part of the spreadsheet you'd like to print by highlighting everything you want printed and clicking on Print Area and then Set Print Area. Excel may think that even empty rows and columns need to be printed, so don't skip this step even if you want all of your data to print.

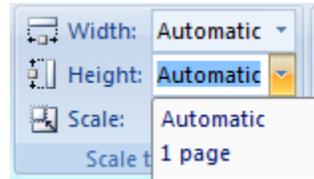
	C3	E	F	G	K	L	U	Z	AA	AB	AD	AE	AF	AY	AZ	BA	BB	BC	BD	BE	BF	BG	EY	EZ	FA
3	2014-15	2014-15		2014-15				2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	FALL 2013	MID-YEAR 2013-14	SPRING 2014	GROWTH								
4	Teache	Name	ID	Checked in with parents?	Grade	Ethnicity	Home Lang	Attendance Rate	Attendance Rate	Attendance Rate	Suspended Days	Suspended Days	Suspended Days	Lexile	Lexile Grade	Lexile	Lexile Grade	Lexile	Lexile Grade	Lexile	Lexile Grade	Fall - MidYear Lexile Growth	MidYear - Spring Lexile Growth	Fall - Spring Lexile Growth	
18	Matthew	Bbbbb	123456	Y	9	AfrAmer	Engl		96.1%	68.3%			5	777	5.5	709	5	930	8	-0.5	3	2.5			
211	Laura Hu	Bbbbb	123456		9	AfrAmer	Engl	96.1%	91.1%	74.4%				568	3.5	641	4				0.5				
219	Joel Win	Ccccc	123456	Y	9	Latino	Span		97.7%	76.1%				378	2			108	1					-1	
398	Joel Win	Aaaaa	123456		9	AfrAmer	Engl	100.0%	94.4%	78.9%		5	9	583	3.5	759	5.5				2				
849	Karina O	Bbbbb	123456		9	Latino	Engl	87.8%	81.1%	78.9%				712	5	745	5	816	6	0	1	1			
904	Sadie Ski	Bbbbb	123456		9	Latino	Engl	93.9%	73.9%	79.4%		5		849	6.5	840	6.5	399	2	0	-4.5	-4.5			
914	Jennifer	Ccccc	123456		9	Latino	Span	92.2%	91.1%	82.2%				83	0			199	1					1	
916	Wei Wan	Ccccc	123456		9	AfrAmer	Engl	95.6%	87.2%	83.9%				1149	11	1225	11	1178	11	0	0	0			
966	Jennifer	Bbbbb	123456		9	AfrAmer	Engl	93.3%	91.7%	84.4%		8													
982	Kathryn R	Aaaaa	123456		9	White	Arab	98.9%	98.3%	85.0%				634	4	717	5	792	5.5	1	0.5	1.5			
986	Jah Yee V	Aaaaa	123456		9	AfrAmer	Engl	97.2%	98.9%	86.1%				594	3.5	754	5.5	793	5.5	2	0	2			
996	Patricia B	Aaaaa	123456		9	AfrAmer	Engl	87.7%	92.8%	86.1%		2	5	490	2.5	212	1.5				-1				
1128		Aaaaa	123456		9	White	Engl		92.2%	86.7%				968	8.5	985	8.5	1072	11	0	2.5	2.5			
1135	Phillip L	Aaaaa	123456		9	NotSpec	Engl	88.3%	91.7%	86.7%				811	6	786	5.5	998	8.5	-0.5	3	2.5			
1152	Nicholas	Ccccc	123456		9	Latino	Span	94.4%	90.6%	87.2%				443	2.5	564	3.5	791	5.5	1	2	3			
1229	Patricia B	Aaaaa	123456		9	White	Engl	89.4%	90.6%	87.2%		3		760	5.5	845	6.5	854	7	1	0.5	1.5			
1233	Phillip L	Aaaaa	123456		9	Asian	Engl	95.0%	97.2%	87.2%		1		1074	11	1017	9.5	1168	11	-1.5	1.5	0			
1242	Jennifer	Bbbbb	123456		9	AfrAmer	Engl	92.8%	81.7%	87.8%			2	126	1	307	2	183	1	1	-1	0			
1324	CATHRIN	Aaaaa	123456		9	Latino	Span	93.9%	93.9%	88.3%				506	3	581	3.5				0.5				
1549	Joel Win	Bbbbb	123456		9	White	Othe	95.0%	92.2%	88.3%				1189	11	1133	11	1210	11	0	0	0			
1697	Johanna	Aaaaa	123456		9	AfrAmer	Engl	92.8%	93.9%	88.3%				139	1	233	1.5				0.5				
1704	Karina O	Aaaaa	123456		9	Asian	Engl	86.1%	92.8%	88.3%				918	8	475	2.5	814	6	-5.5	3.5	-2			
1737	Kathryn R	Ccccc	123456		9	AfrAmer	Engl	94.4%	93.9%	88.3%				386	2	564	3.5	537	3	1.5	-0.5	1			
1752	Darlene E	Ccccc	123456		9	Latino	Engl	96.1%	93.9%	88.9%				541	3	708	5	373	2	2	-3	-1			
1863	Karina O	Aaaaa	123456		9	Asian	Engl	97.2%	93.9%	88.9%				1282	11	1208	11	1225	11	0	0	0			
1866	Nicholas	Aaaaa	123456		9	AfrAmer	Engl	100.0%	99.4%	88.9%		1		767	5.5	840	6.5	939	8	1	1.5	2.5			
1877	Teacher R	Aaaaa	123456		9	AfrAmer	Engl	97.2%	94.4%	88.9%		1				299	1.5								
1888	CATHRIN	Bbbbb	123456		9	Latino	Span	97.8%	98.3%	89.4%				888	7.5	925	8	542	3	0.5	-5	-4.5			
2007	Kathryn R	Aaaaa	123456		9	White	Engl	95.0%	95.0%	89.4%				1238	11	1262	11	1282	11	0	0	0			
2018	Phillip L	Ccccc	123456		9	AfrAmer	Engl	97.8%	94.4%	89.4%		5		578	3.5			902	8					4.5	
2102	Timothy	Ccccc	123456		9	AfrAmer	Engl	94.4%	92.2%	89.4%								752	5.5						



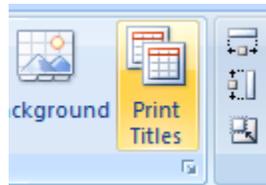
Excel now knows not to bother printing anything else. Now let's tell Excel that we want all of the columns to fit in the width of one page. Still in the Page Layout tab, click on the dropdown menu next to Width—this tells Excel how many pages wide you want. Click on 1 page.



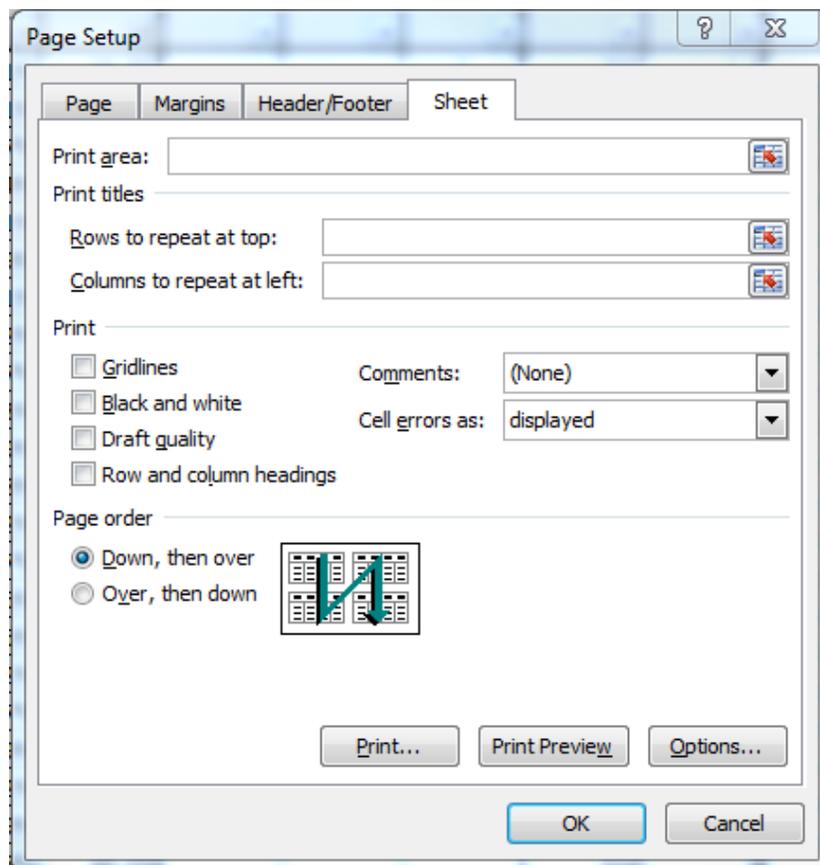
We don't want the data to look too small, so we're ok with the rows fitting on as many pages as Excel thinks is best given the Width we selected, so we'll leave Height on "Automatic."



However, it's important that on every page we be able to see the column names. Otherwise after page 1 we won't know which column is which. We also want to make sure we print Landscape, to make the most of the space on the paper. Click on Print Titles to change these options.



You'll see this window pop up:

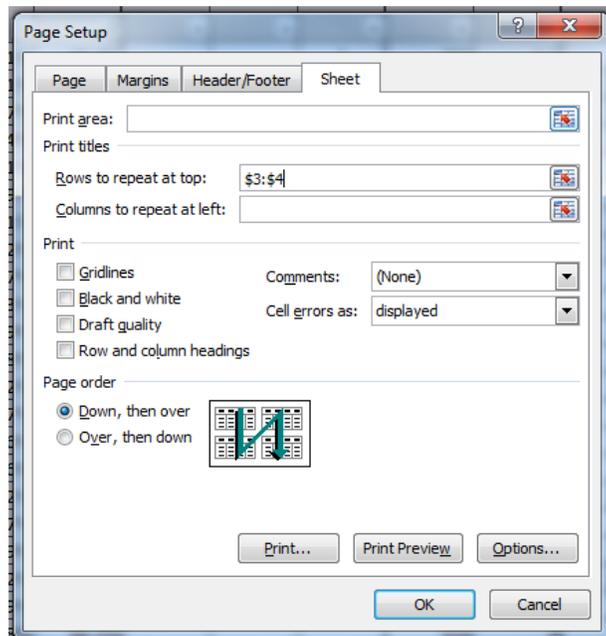


We've already set the Print area, but we want the rows with the names of the columns to repeat on each page. Click on the button next to "Rows to repeat at top" and highlight the rows you want repeated.

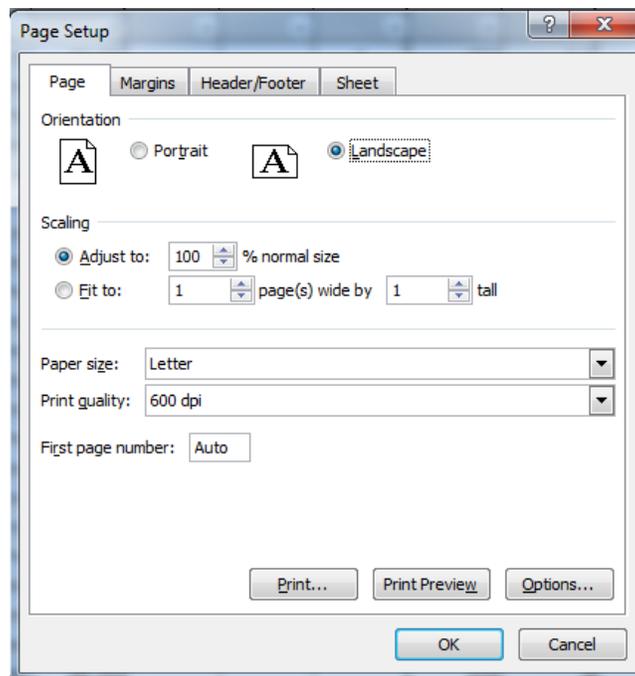
It'll look like this:

	C	E	F	G	K	L	U	Z	AA	AB	AD	AE	AF	AY	AZ	BA	BB	BC	BD	BE	BF	BG	
3	2014-15	2014-15				2014-15		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	FALL 2013	MID-YEAR 2013-14	SPRING 2014							
4	Teacher	Name	ID	Checked in with parents?	Grade	Ethnicity	Home Lang	Attendance Rate	Attendance Rate	Attendance Rate	Suspended Days	Suspended Days	Suspended Days	Lexile	Lexile Grade	Lexile	Lexile Grade	Lexile	Lexile Grade	Fall - MidYear Lexile Grade	MidYear - Spring Lexile Grade	Fall - Spring Lexile Grade	
18	Matthew	Bbbbbbb	123456	Y	9	AfrAmer	Engl	96.1	96.1	96.1						709	5	930		8	-0.5	3	2.5
211	Laura Hu	Bbbbbbb	123456		9	AfrAmer	Engl	96.1%	91.1							641	4				0.5		
219	Joel Wing	Cccccccc	123456	Y	9	Latino	Span	97.7%	76.1%					378	2			108	1				-1

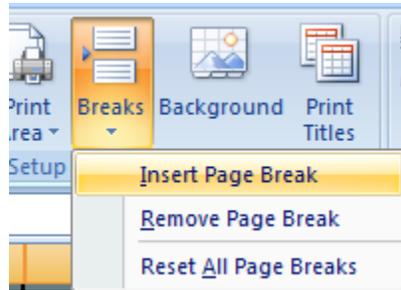
When you're done, press Enter. You'll return to the Page Setup window.



We also want to make sure we print in Landscape, so click on the Page tab and select landscape.



If you know where you want to break up the pages, rather than leaving it to Excel, you can highlight a row and click on the Breaks button in the Page Setup tab. Excel will start a new page at that row.



There are other ways to tweak printouts, but these are the basics. Don't be afraid to try different things—you can click on Print Preview before actually printing to see how it's going to look!

7. Conditional Formatting

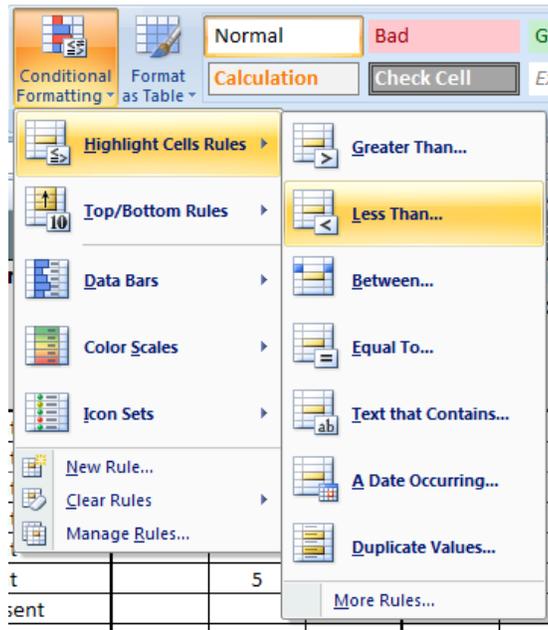
The next two steps are not essential to exploring data in Excel—but they can come in very handy at times. With conditional formatting, it's all about visualizing data at a glance through colors instead of reading the data one by one.

To continue with the same example, say we're still looking at the 31 students in Grade 9 who are chronically absent. Is this a pattern or are these students just having a bad year? An easy way to look at students' attendance patterns over three years is to use conditional formatting. We'll make any year below 90% turn red.

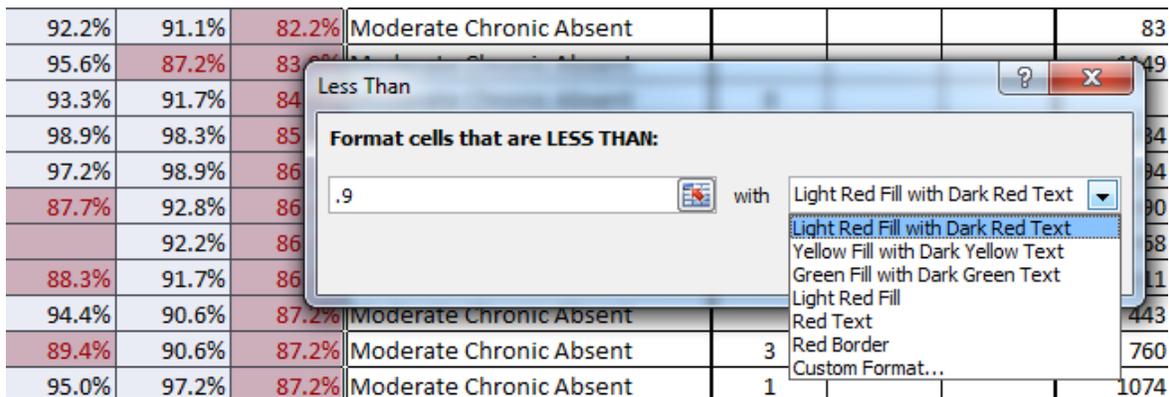
Begin by highlighting the cells you want to format (three years of attendance rates). Now click on the Conditional Formatting button in the Home tab.

	C	E	F	J	K	T	Y	Z	AA	AB	
3	2014-15	2014-15		2014-15			2011-12	2012-13	2013-14		
4	Teacher	Name	ID	Grade	Ethnicity	Home Lang	Attendance Rate	Attendance Rate	Attendance Rate	Attendance Rate	Grade
9	Matthew	Bbbbbbb	123456	9	AfrAmer	Engl		96.1%	68.3%	Severe Chronic Absent	
13	Laura Hu	Bbbbbbb	123456	9	AfrAmer	Engl	96.1%	91.1%	74.4%	Severe Chronic Absent	
18	Joel Win	Cccccccc	123456	9	Latino	Span		97.7%	76.1%	Severe Chronic Absent	
25	Joel Win	Aaaaaaa	123456	9	AfrAmer	Engl	100.0%	94.4%	78.9%	Severe Chronic Absent	
34	Karina O	Bbbbbbb	123456	9	Latino	Engl	87.8%	81.1%	78.9%	Severe Chronic Absent	
37	Sadie Ski	Bbbbbbb	123456	9	Latino	Engl	93.9%	73.9%	79.4%	Severe Chronic Absent	
56	Jennifer	Cccccccc	123456	9	Latino	Span	92.2%	91.1%	82.2%	Moderate Chronic Absent	
208	Wei Wan	Cccccccc	123456	9	AfrAmer	Engl	95.6%	87.2%	83.9%	Moderate Chronic Absent	
210	Jennifer	Bbbbbbb	123456	9	AfrAmer	Engl	93.3%	91.7%	84.4%	Moderate Chronic Absent	8
211	Kathryn H	Aaaaaaa	123456	9	White	Arab	98.9%	98.3%	85.0%	Moderate Chronic Absent	
212	Jah Yee V	Aaaaaaa	123456	9	AfrAmer	Engl	97.2%	98.9%	86.1%	Moderate Chronic Absent	
214	Patricia B	Aaaaaaa	123456	9	AfrAmer	Engl	87.7%	92.8%	86.1%	Moderate Chronic Absent	2
219		Aaaaaaa	123456	9	White	Engl		92.2%	86.7%	Moderate Chronic Absent	5
220	Phillip Le	Aaaaaaa	123456	9	NotSpec	Engl	88.3%	91.7%	86.7%	Moderate Chronic Absent	

Different options will come up. A good place to start is clicking on Highlight Cell Rules. From the options available, we will select Less Than because we want all attendance rates less than 90% to turn red.



The following window will pop up. Type in 0.9 and select the Light Red Fill with Dark Red Text option. Other options are available or you can select a Custom Format if you like. Notice that already we see the cells being formatted.



Once we take a look at the whole spreadsheet, it's clear right away that most students do not have a sustained pattern of chronic absence—in fact, most had high attendance rates the previous year! Rather than reading through each cell, we can detect a pattern and pinpoint the students for whom chronic absence *has* been a consistent problem over time.

There are many other ways to use conditional formatting. Next time you ask a question of the data, think about whether color coding could help.

8. Pivot Tables

“PivotTable” isn’t a very intuitive name for one of Excel’s most powerful tools for data analysis. A pivot table refers to the fact that we can pivot data to make tables that summarize the data in more meaningful ways, for example by summing, counting, or averaging data and looking at multiple data fields together.

The CSDR is a spreadsheet at the student level—it has a row per student. To better understand what 9th graders who are chronically absent look like, we may wish to build a pivot table that shows some key student characteristics against attendance categories.

Let’s begin with the original CSDR. Pivot tables work best when the top row has column names, so we will delete all the extra rows at the top of the document that we don’t need, until we are left with this as the top row:

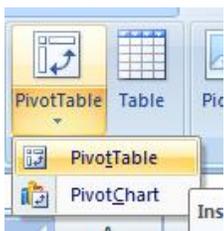


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	OPS Site Code	Teacher	Course	Name	ID	School	Teacher / Advisor	Summer Site / Hub	Grade	Ethnicity	Ethnicity (detail)	Gender	Birth Date	Original OUSD Enter Year	School Enter Date	Disability (Special Ed)	Disability Category	GATE	Home Lang	English Fluency	Fluency Group (August 2014)	EL Years	Birth Country	Attendance Rate	Attendance Rate	Attendance Rate

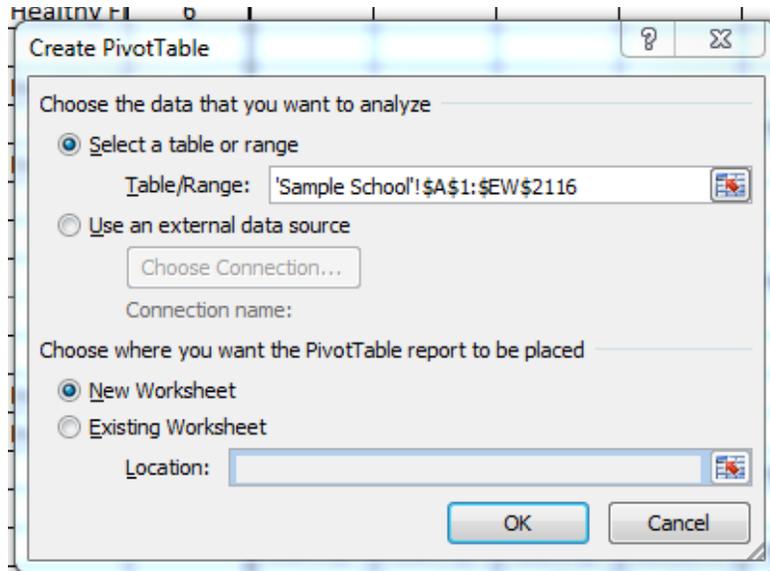
Now click on the Insert tab and click on the PivotTable button all the way on the left.



Select PivotTable:

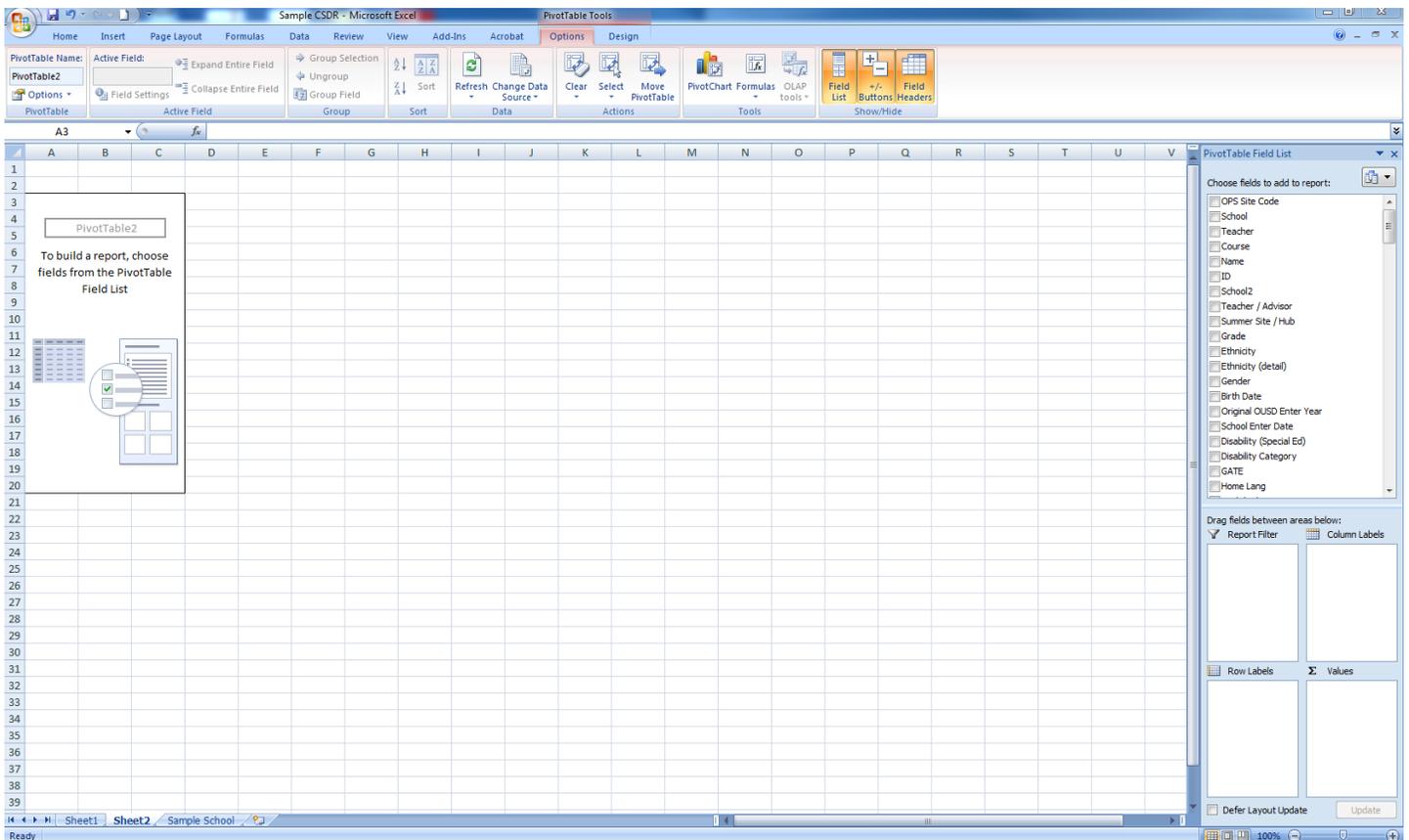


The following window will pop up:



If nothing appears in Table/Range, highlight the data you want to analyze and press Enter (however, if you made sure the top row has just field names, the Table/Range should automatically appear). Click OK.

You'll now be taken to a new sheet with a menu bar on the right. This is where you will build your PivotTable.



Earlier we said we wanted to understand Grade 9 attendance better. Let's start by looking at the ethnicity of students and their attendance category. Perhaps we want to know how many students fall into each category in Grade 9. This is what the final product will look like:

Grade	9								
Count of ID	Column Labels								
Row Labels	AfrAmer	Asian	Filipino	Latino	NatAmer	NotSpec	PacIsl	White	Grand Total
At Risk	24	3		17		2		6	52
Moderate Chronic Absent	14	4		5		2		6	31
Satisfactory	103	81	10	62	2	9	2	63	332
Severe Chronic Absent	3			3					6
(blank)	32	19	1	19	1	3	1	44	120
Grand Total	176	107	11	106	3	16	3	119	541

This table tells us a lot. For example, we see we have 31 students under Moderate Chronic Absent, and almost half (14) are African American. Similarly, almost half of the 52 students at risk of becoming chronically absent are African American.

To build this table, use the PivotTable menu bar on the right. At the top of the menu bar you will see all of the columns in our source data appear. At the bottom you will see 4 options: Report Filter, Column Labels, Row Labels, and Values.

In our example, we want Grade as the Report Filter since we're still only interested in Grade 9 attendance. The column headers are Ethnicity and the row headers are Attendance Rate Category. Let's start by dragging and dropping these field names into the appropriate boxes:

Drag fields between areas below:

 Report Filter

Grade

 Column Labels

Ethnicity

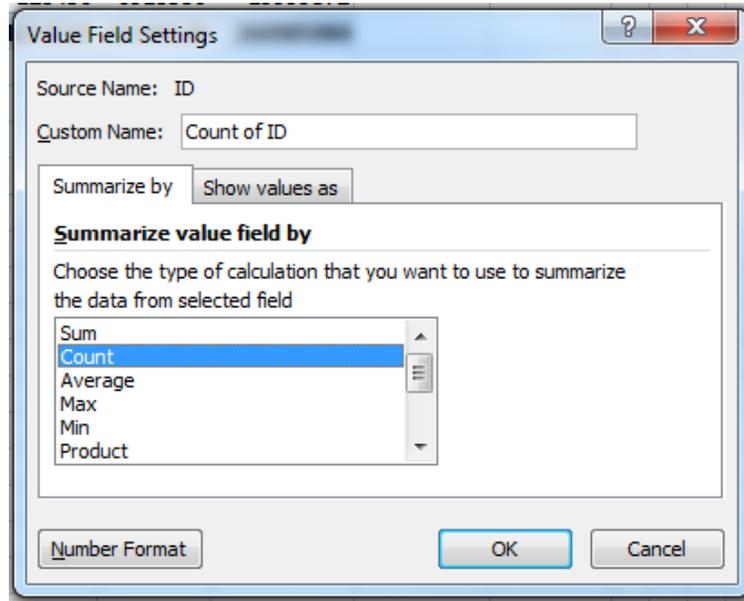
 Row Labels

Attendance R...

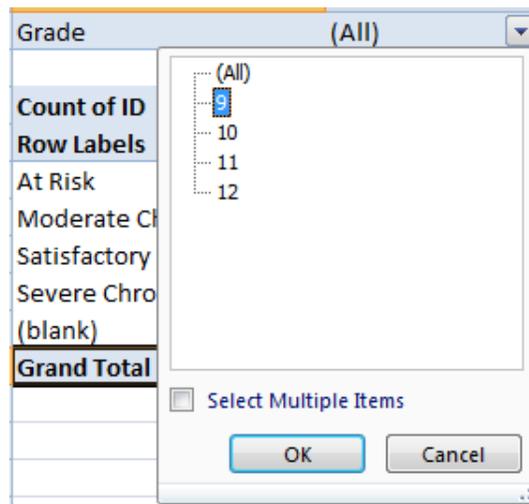
 Values

Defer Layout Update
 Update

The following window will pop up, giving you the option to produce the sum, count, average and more of student IDs. Select Count and click OK.



We're almost there—to make sure we're only looking at Grade 9 students only, go back to the table that appears. The Grade filter has been placed at the top. Click on the dropdown button next to Grade and select 9. Click OK.



You can drag and drop as many field names as you want—perhaps you want to add Gender. Simply drag and drop the Gender field name into Column Labels. Perhaps you want to look at attendance rates by teacher—drag teacher name into the pivot table menu instead. Answering a multitude of questions is as easy as dragging and dropping. If something doesn't look right, try switching the column and row labels and make sure the Values option is the right one.

Still not sure how to make the most of your Excel data?

Contact us through ousddata.org/requests