Pivot Designer

Last Modified on 10/22/2022 10:01 am CDT

Classic View: *Ad Hoc Reporting > Data Analysis > Pivot Designer*

Search Term: *Pivot Designer*

The Pivot Designer tool allows users to analyze, interpret and visually present crossed-referenced data in easy to understand charts and graphs.

For example, a list of students who have a specific race/ethnicity can be selected and cross-referenced with those students' attendance records, behavior incidents and semester grades. This data can then be visually produced on a chart, facilitating comparison and analysis.

This tool uses pivot table functionality. A pivot table is a data summation tool often found in spreadsheets and other business intelligence software. Pivot table tools can sort, count and total the data stored in a table or spreadsheet, and then display the data in a new table or chart.

This tool is designed for Administrators and select power users. Users working within or viewing a Pivot Designer report are able to see data related to tools for which they may not have tool rights to access (with the exception of FRAM). Calendar rights are respected as pivots will not display data tied to calendars for which a user does not have rights to access.

We recommend saving pivots to specific User Groups or as an Outline Link to control user access.

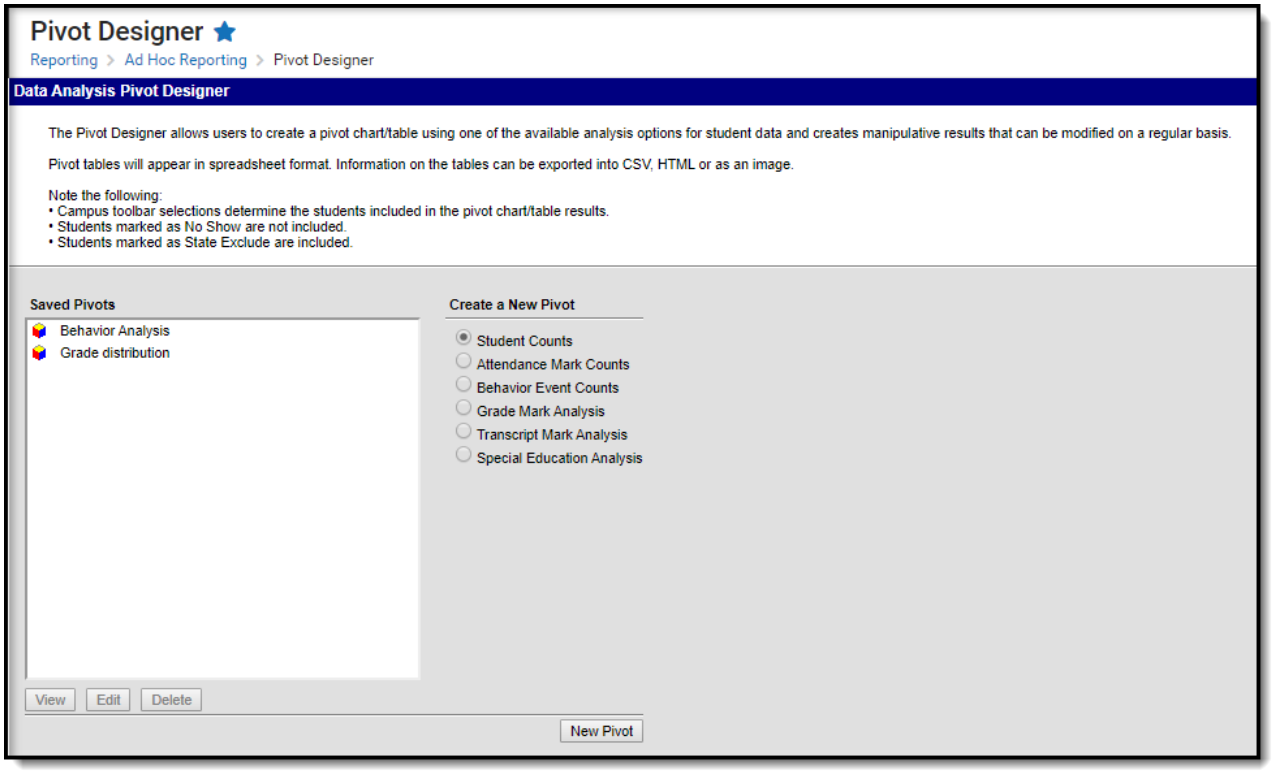


Image 1: Pivot Designer

Create a New Pivot

The following sections will walk you through the process of creating a new pivot:

- Step 1. Select a Pivot Type
- Step 2. Determine Pivot Information, Dimensions, Measures, and Filters

Step 1. Select a Pivot Type

The first step is selecting the type of pivot you would like to make. Use the table below to help understand and decide which pivot type is best for you.

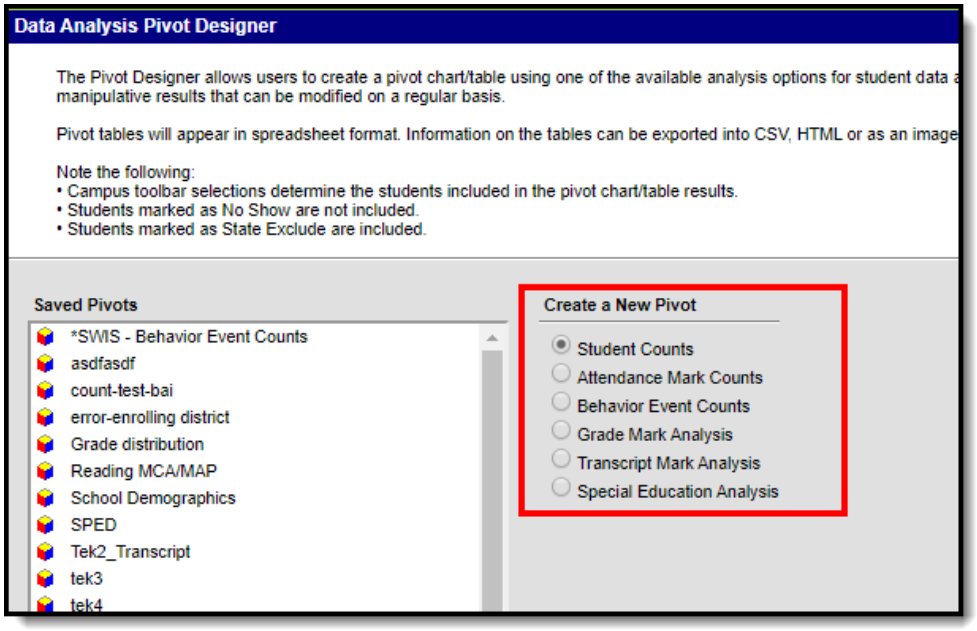


Image 2: Pivot Types

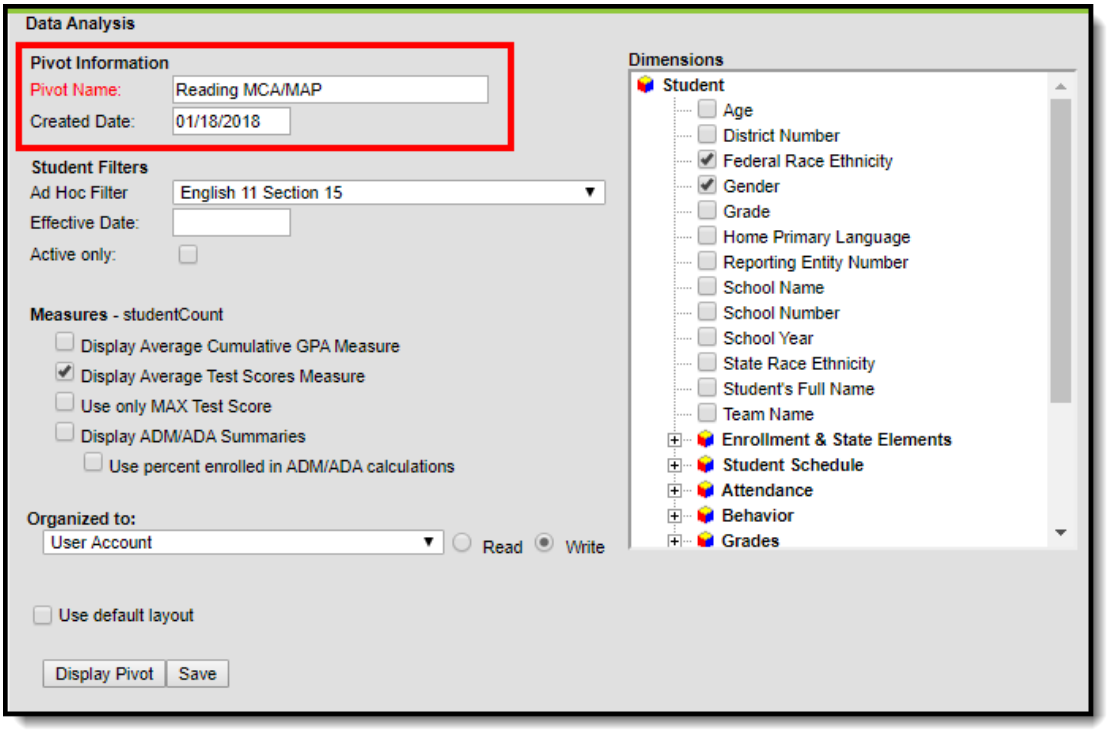
Pivot Type	Description
Student Counts	Bases information on total number of students enrolled. • No show students are not included. • Students marked as State Exclude are included. • Count of Students is the default Measure on the field list.
Attendance Mark Counts	Bases information on students' attendance records. • Students must be on a roster in order to report. • Students must have at least one attendance event. • Each attendance event displays as one count. • No show students are not included. • Students marked as State Exclude are included. • Sum of Period Absences is the default Measure on the field list.
Behavior Event Counts	Bases information on students' behavior records. • Each behavior event displays as one count. • No Show students are included. • Students marked as State Exclude are included. • Count of Behavior Events is the default Measure on the field list.

Pivot Type	Description
Grade Mark Counts	Bases information on the Total Number of Students Enrolled + GPA + Credits Earned. • GPA is based on the student's Grades tab. • Credits Earned is based on the student's Transcript tab. • Each credit earned displays as one count. • No Show students are included. • Students marked as State Exclude are included. • Count of Grades, Sum of Credits Earned and Weighted Term GPA are the default Measures on the field list.
Transcript Mark Counts	Bases information on students' transcripts. • Only students who have transcript credits on the Transcript tab are included. • Each posted transcript credit on a student's Transcript tab displays as one count. • No Show students are included. • Students marked as State Exclude are included. • Count of Transcript Records, Sum of Credits Earned and Transcript GPA are the default Measures on the field list.
Special Education Analysis	Bases information on students who have a special education record. • Students must have a locked IEP in order to report. • No Show students are included. • Students marked as State Exclude are included. • Count of Special Education students is the default Measure on the field list.

Step 2. Determine Pivot Information, Dimensions, Measures, and Filters

Once a pivot type is selected, you must now determine pivot information, any filters or measures to apply, and what dimensions will be used for reporting data. Use the table below for help in understanding each section.

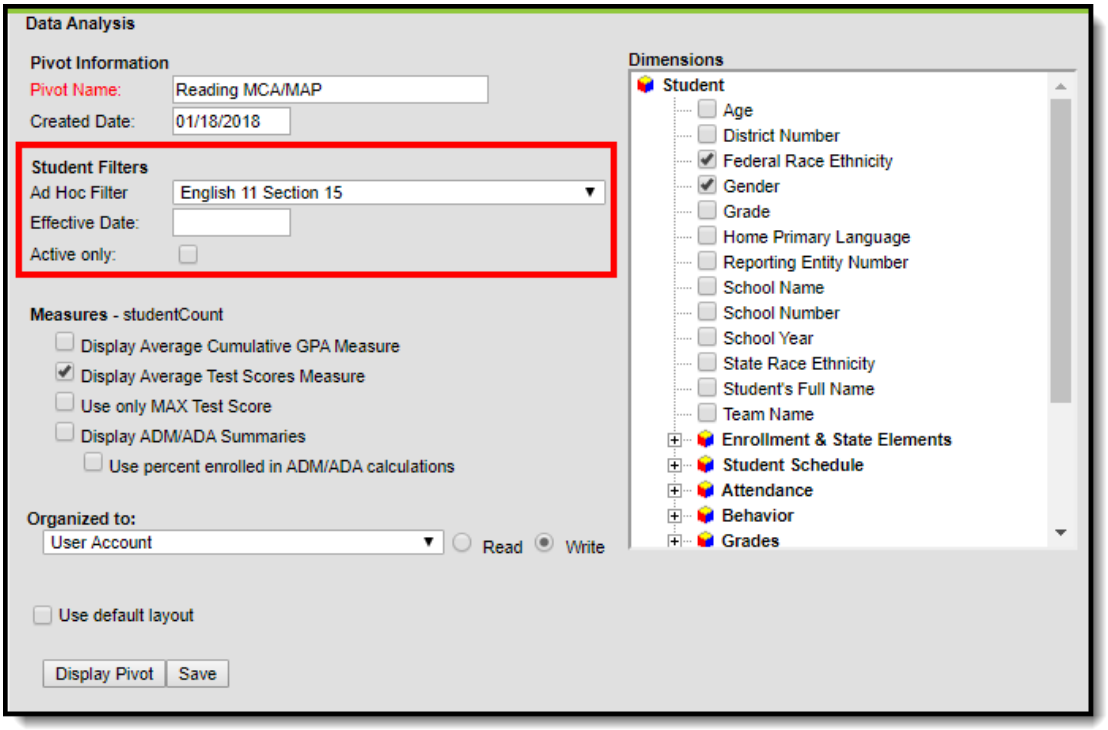
Pivot Information



Pivot Information fields are used for identification purposes so you can more easily locate and reuse this pivot in the future.

A **Pivot Name** is required for all pivots (unless the pivot will be used immediately and not saved). The **Created Date** indicates when the pivot was first created.

Student Filters

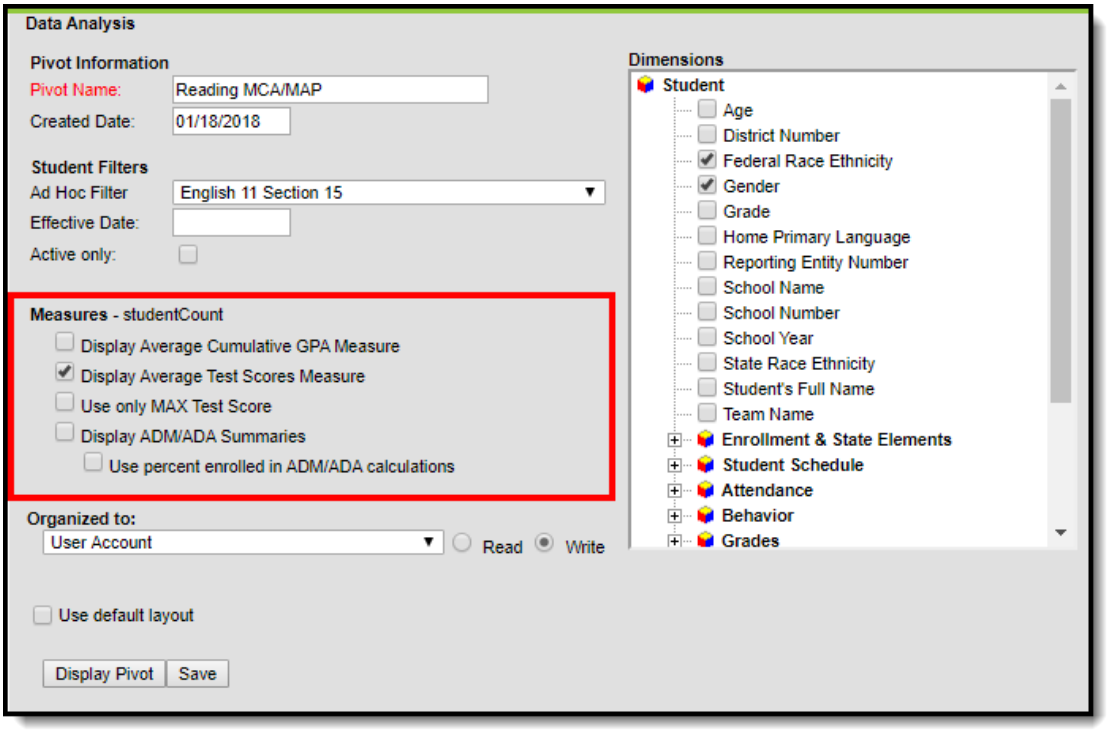


Users can select an **Ad hoc Filter** that contains specific students who will make up the population reported in the pivot.

If an **Effective Date** is entered, only students who are actively enrolled as of this date are included in the pivot.

Marking the **Active Only** checkbox will force the pivot to only return students who are enrolled on the current date (today).

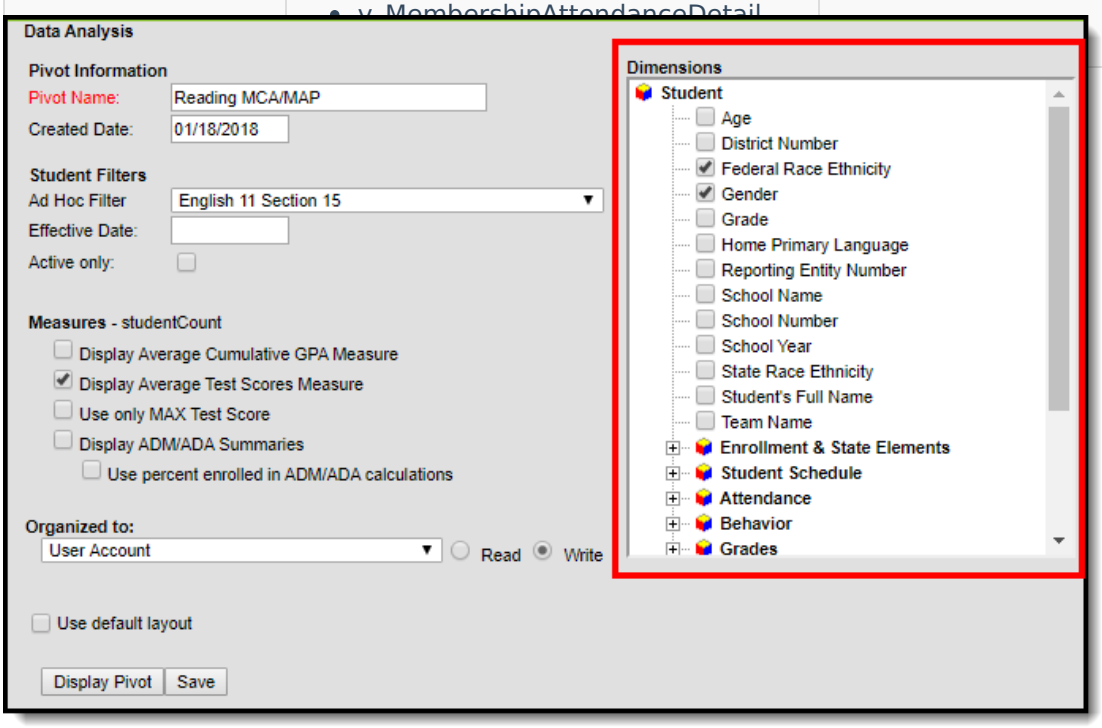
Measures



Select the desired measures for the pivot table. These options vary based on the type of pivot selected. The following is a list of available Measures and their corresponding Pivot Types.

Measure	Description	Pivot Type
Display Average Cumulative GPA Measure	The pivot displays the Average Cumulative GPA for all reported students. If selected, the view v_CumGPA is used to generate results.	• Student Counts • Attendance Mark Counts • Behavior Event Counts • Grade Mark Analysis • Transcript Mark Analysis • Special Education Analysis
Display Average Test Scores Measure	The pivot will display students' average test scores.	• Student Counts • Attendance Mark Counts • Behavior Counts • Grade Mark Analysis • Transcript Mark Analysis • Special Education Analysis
Use only MAX Test Score	The pivot will display students' highest test score.	• Student Counts • Attendance Mark Counts • Behavior Event Counts • Grade Mark Analysis • Transcript Mark Analysis • Special Education Analysis
Display ADM/ADA Summaries	The pivot will display students' Average Daily Membership (ADM) and Average Daily Attendance (ADA).	• Student Counts

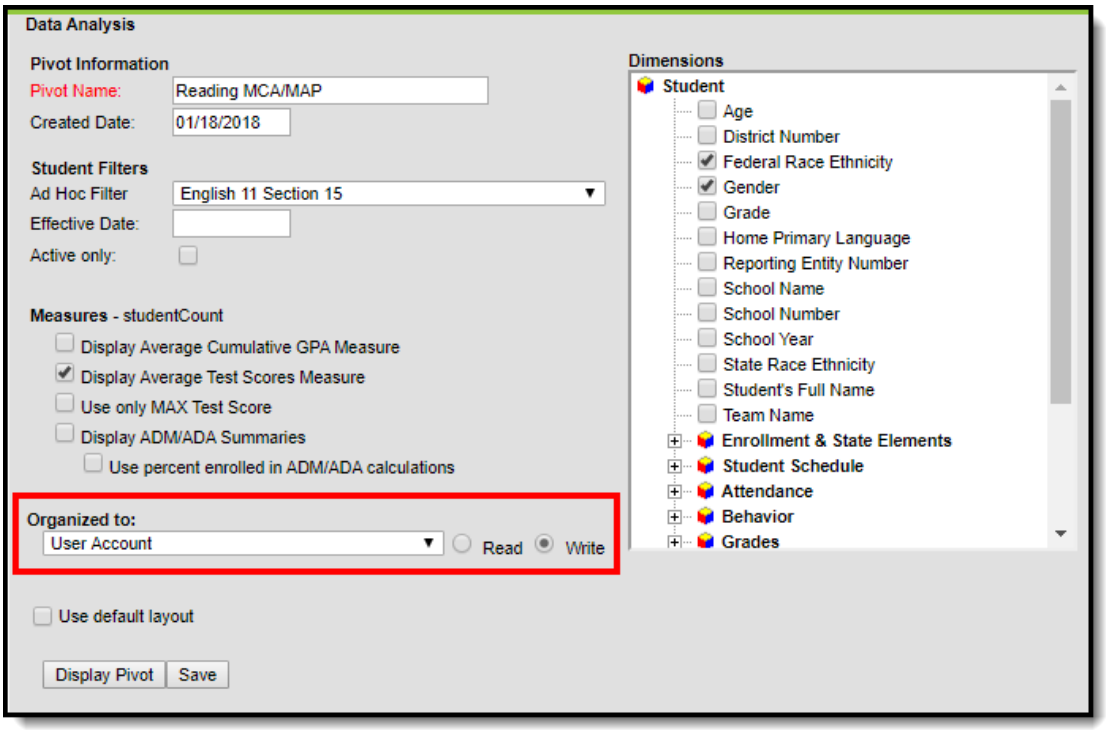
Measure	Description	Pivot Type
Use percent enrolled in ADM/ADA calculations	This field determines which views are used for calculating ADM/ADA and whether or not Percent Enrolled is taken into account. If Percent Enrolled is selected, the following views are used: • v_MembershipAttendance EnrollmentDetailPercent • v_MembershipAttendance DetailPercent If Percent Enrolled is not selected, the following views are used: • v_MembershipAttendance EnrollmentDetail • v_MembershipAttendanceDetail	• Student Counts
Dimensions		



Dimensions allow users to designate specific data elements that are pulled into the pivot table. These data elements are fields found throughout Campus. You must select at least two data elements in order to generate a pivot table. Select data elements by marking the checkbox next to the desired field.

For detailed information about each dimension and data element, see the Understanding Dimensions section below.

Organized to



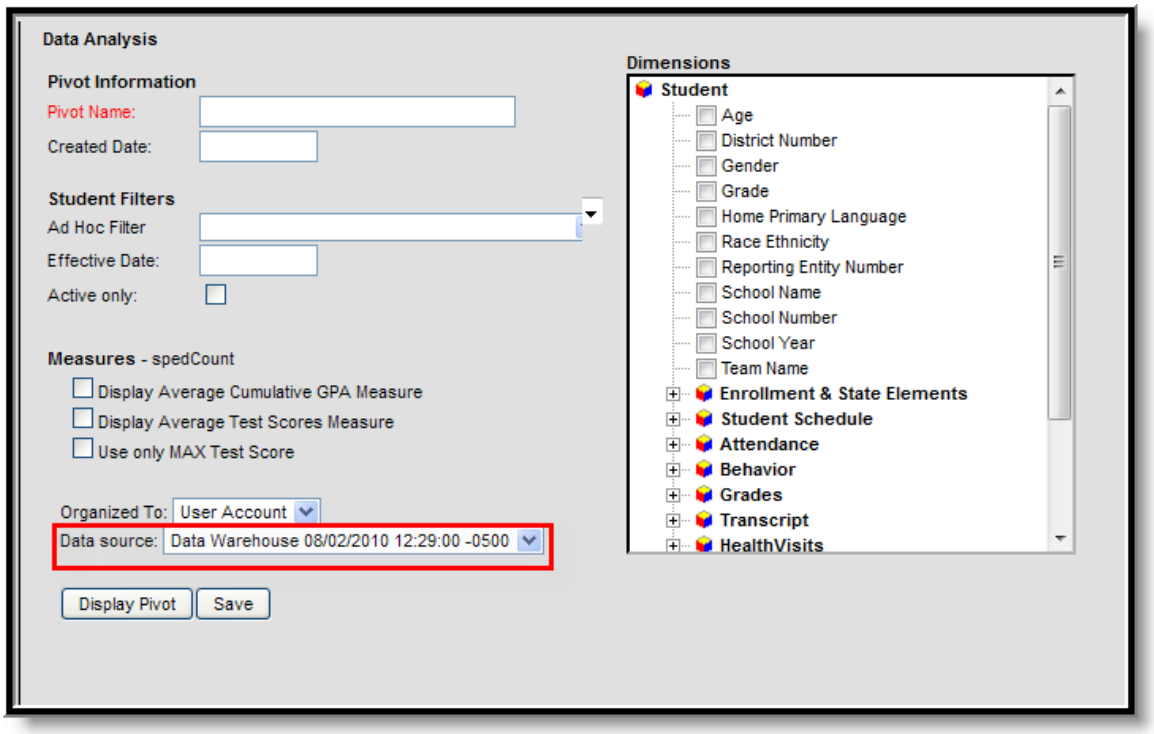
This field indicates which user groups are allowed access to the pivot from the Saved Pivots list.

This tool is designed for Administrators and select power users. Users working within or viewing a Pivot Designer report are able to see data related to tools for which they may not have tool rights to access (with the exception of FRAM). Calendar rights are respected as pivots will not display data tied to calendars for which a user does not have rights to access.

We recommend saving pivots to specific User Groups or as an Outline Link to control user access.

Marking the **Read** checkbox means users in this user group can only generate and view the pivot. Marking the **Write** checkbox means users in this user group can edit and view the pivot.

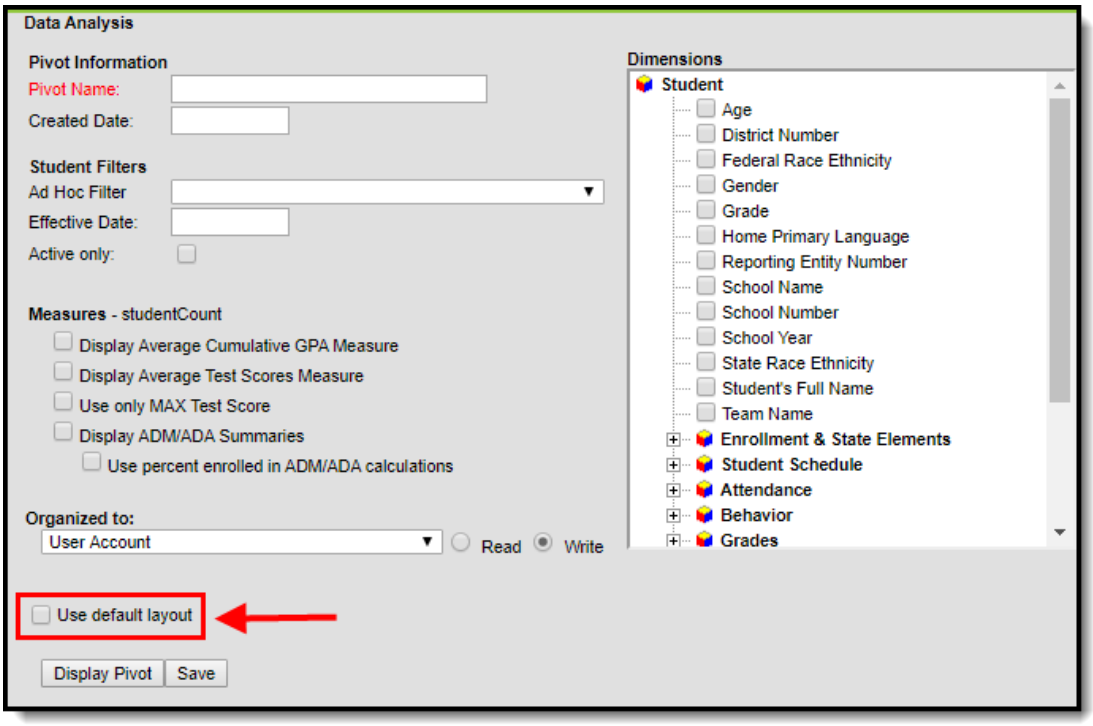
Data Source



The Data Source determines which database is used when pulling pivot information.

This option is only available to customers who have Data Warehouse Settings properly configured.

Use Default Layout



Marking this checkbox will display the pivot in the default format, ignoring any and all saved modifications made within the Pivot Designer tool.

Understanding Dimensions

Dimensions allow users to designate specific data elements that are pulled into the pivot table. These data elements are fields found throughout Campus. You must select at least two data elements in order to generate a pivot table.

- If **All Years** and **All Schools** are selected in the Campus toolbar, the **School Name** and **School Year** elements must be selected in order for the pivot to display correct data.
- Only dimensions available to all districts are listed. State-specific or Reporting Entity-specific fields are not included.

- Student enrollment pivots within the Pivot Designer tool will report data from historical LEP fields and not from new LEP fields.

Data Analysis uses database views to more efficiently pull data into pivots.

The following section describes all available dimensions within Pivot Designer and the mapping and definition of each data element within each dimension.

Student

View: cube_student

Click here to expand...

Enrollment and State Elements

View: cube_enrollment

Click here to expand...

Student Schedule

View: cube_roster

Click here to expand...

Attendance

View: cube_attendance

Click here to expand...

Behavior

View: cube_behavior

Click here to expand...

Grades

View: cube_grades

Click here to expand...

Transcript

View: cube_transcript

Click here to expand...

Health Visits

View: v_HealthVisitDetail

Click here to expand...

Medication

View: v_MedicationDetail

Click here to expand...

Special Education

View: cube_sped

Click here to expand...

Blended Learning

View: cube_blendedLearning

Click here to expand...

Food Service

View: cube_fram

Click here to expand...

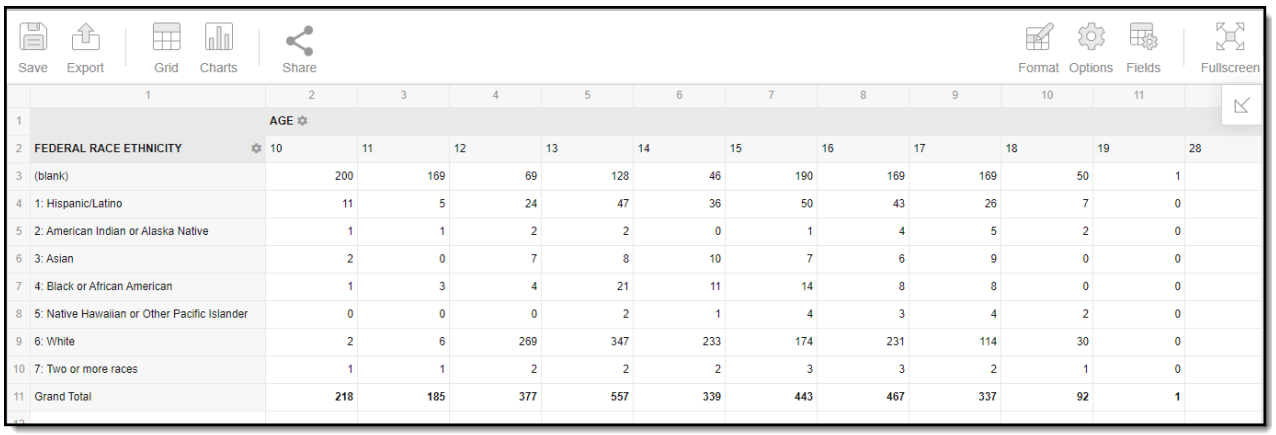
Standardized Tests

View: This view is built dynamically based on the contents of the Test and TestScore tables.

Click here to expand...

Understand Pivots

Once pivot elements are defined in the Pivot Designer editor or an existing pivot has been opened, users are directed to the Pivot Designer tool. This tool displays all information generated based on the cross-referenced dimensions.From here, users can further manipulate pivot data and present this information in several visual charts.



		AGE									
FEDERAL RACE ETHNICITY	10	11	12	13	14	15	16	17	18	19	28
(blank)	200	169	69	128	46	190	169	169	50	1	
1: Hispanic/Latino	11	5	24	47	36	50	43	26	7	0	
2: American Indian or Alaska Native	1	1	2	2	0	1	4	5	2	0	
3: Asian	2	0	7	8	10	7	6	9	0	0	
4: Black or African American	1	3	4	21	11	14	8	8	0	0	
5: Native Hawaiian or Other Pacific Islander	0	0	0	2	1	4	3	4	2	0	
6: White	2	6	269	347	233	174	231	114	30	0	
7: Two or more races	1	1	2	2	2	3	3	2	1	0	
Grand Total	218	185	377	557	339	443	467	337	92	1	

Image 3: Example of a Pivot Table

To filter a dimension, click the gear icon next to the dimension header (Image 4).

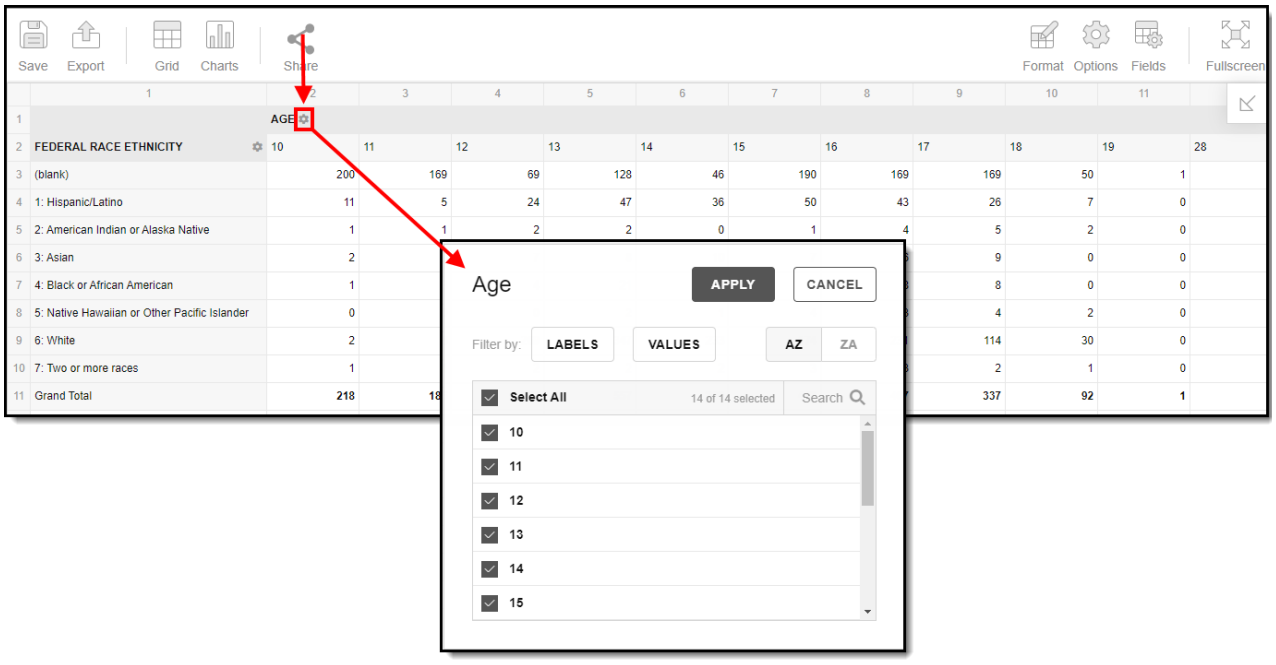


Image 4: Filtering a Dimension

From here you can filter dimension data by label or value as well as modify the dimension sort order. For example in the image below, filtering the Age dimension by Labels and setting the filter parameters to Equal 9 results in the pivot only displaying cross-referenced data for students Age 9.

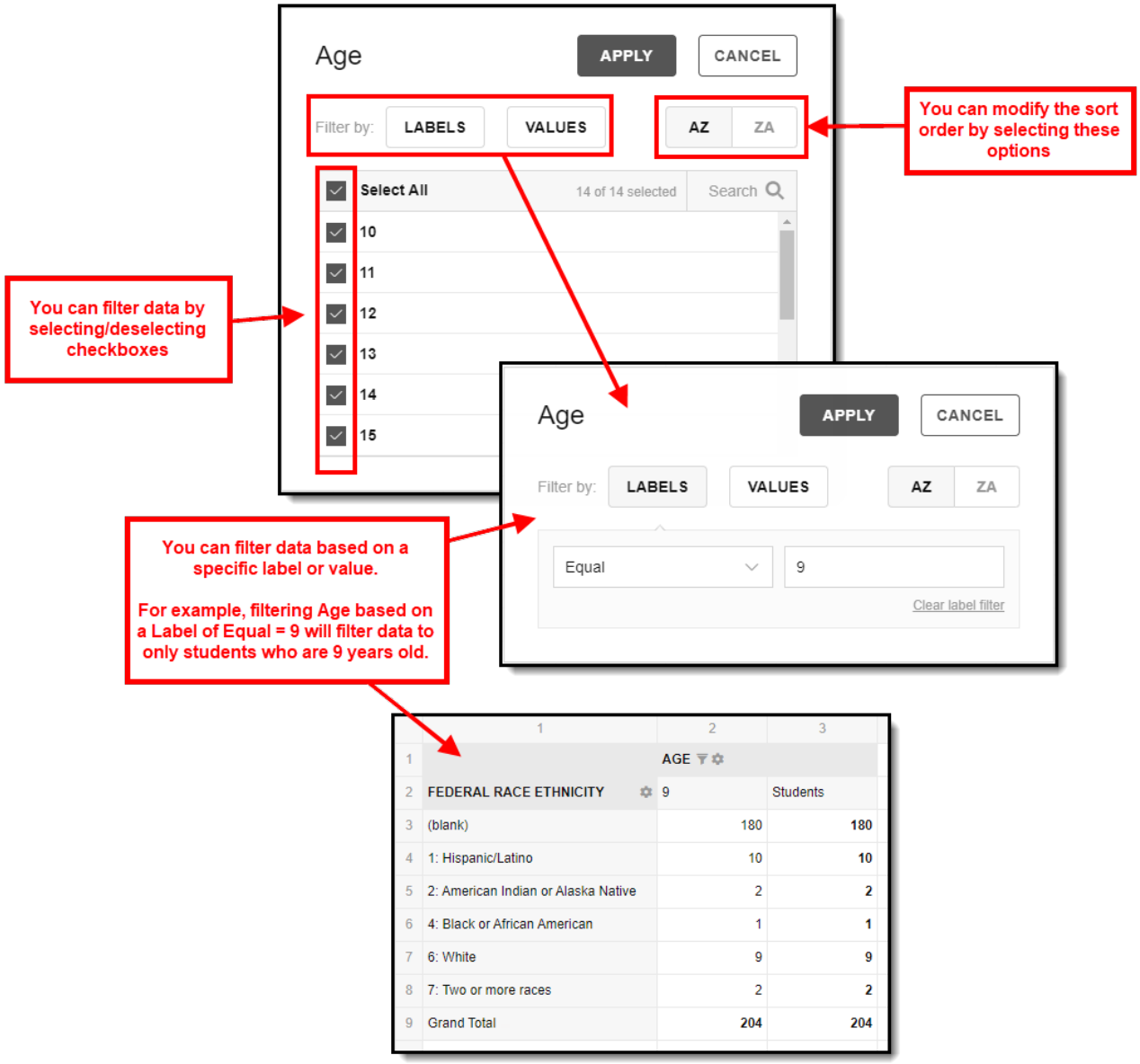


Image 5: Example of Filtering a Dimension

Selecting the **Fields** icon allows you to modify the order of the fields in the pivot, add or remove fields from the pivot table, and modify which fields are used in rows or columns (Image 6).

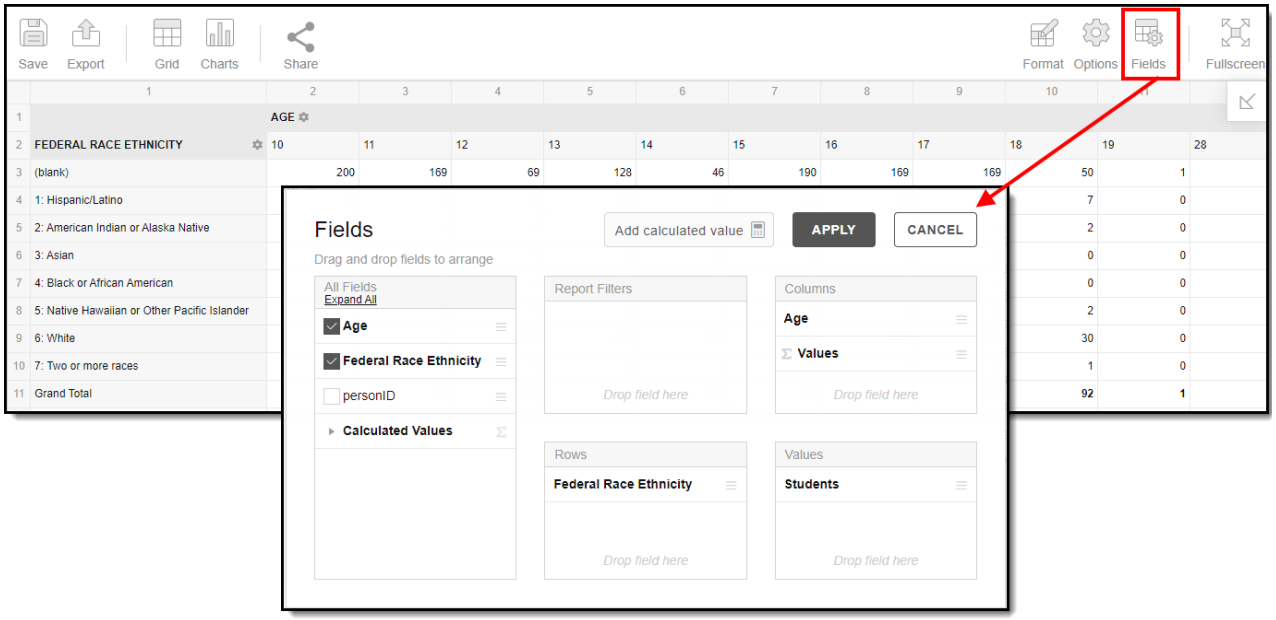


Image 6: Modify Field Options

You can also modify or insert specific calculations to be used in the pivot table by clicking the **Add calculated value** button (Image 7). When adding calculated values, users can use aggregation key words to produce aggregates that aren't available when selecting the sigma droplist.

For example, notice in Image 7 the how the first option is Age (Count). The aggregation function is Count. Clicking the Sigma displays Count and Distinct Count only, however, users can modify the aggregation function when creating a calculated value using these additional keywords:

- Count
- Distinct Count
- % of Grand Total (Percent)
- % of Column (Percent of Column)
- % of Row (Percent of Row)

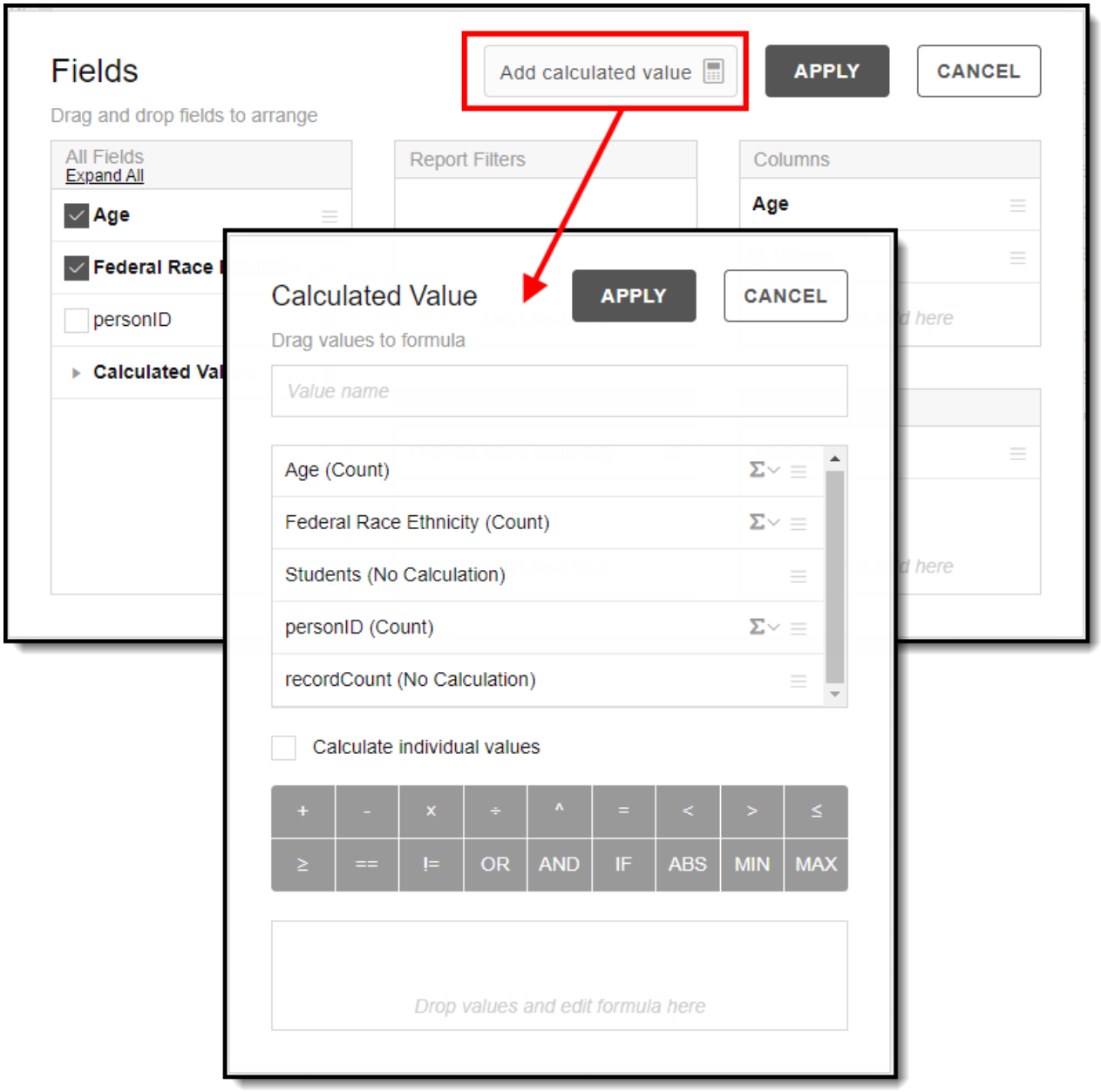


Image 7: Add a Calculated Value

In the example below, the personID field was added and applied to the pivot table. This additional field created a second dimension tied to Federal Race Ethnicity (Image 8).

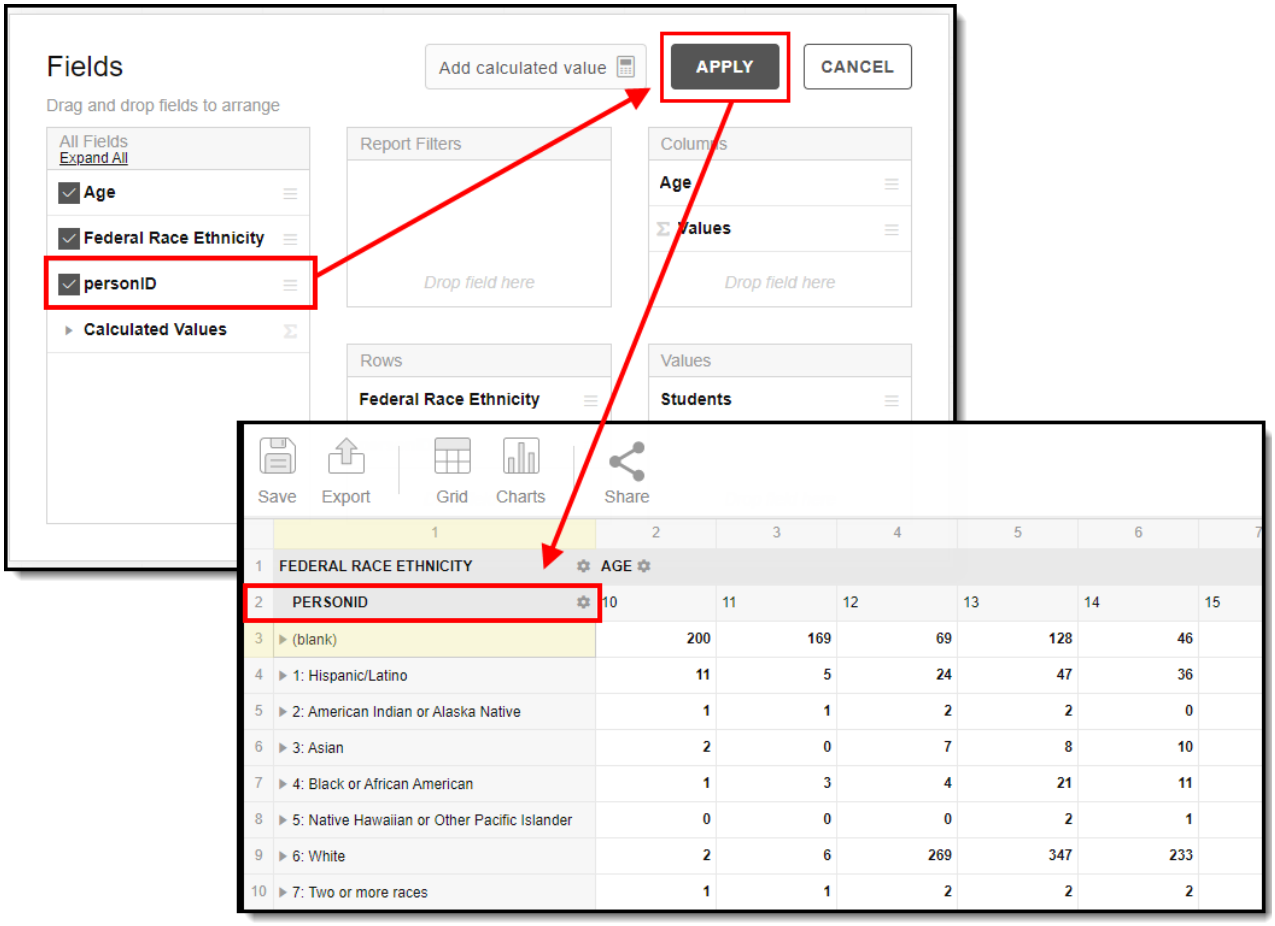


Image 8: Applying Field Options

Adding this additional dimension means Federal Race Ethnicity values can now be drilled down to see the personIDs of all students reporting for this Race Ethnicity value (Image 9)

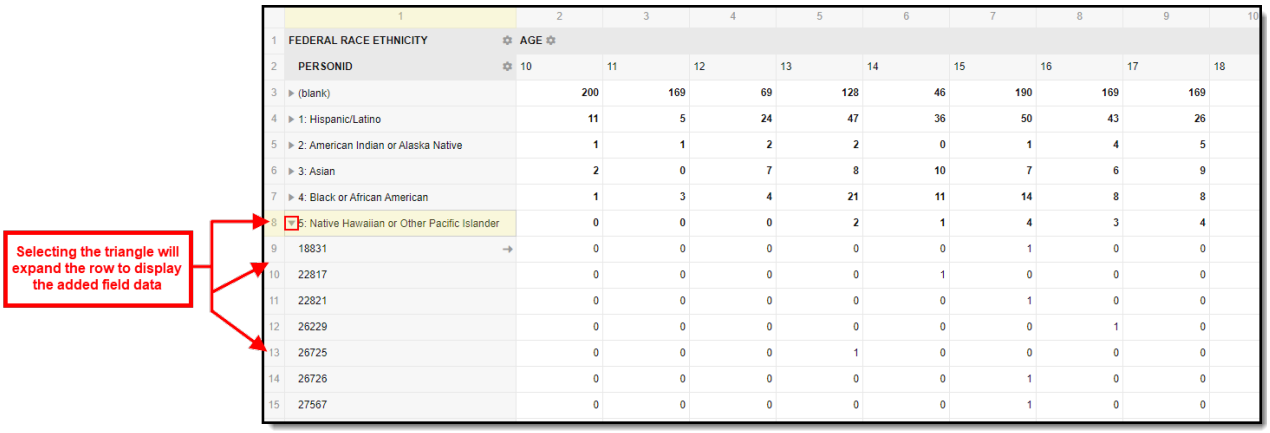


Image 9: Drilling Down Dimension Data

You can further drill down on pivot table data by double-clicking on a specific cell. This will display all the cross-referenced information contained within the cell. For example in the image below (Image 10), this cell is reporting data for a 10 year old Asian student with a PersonID of 12300.

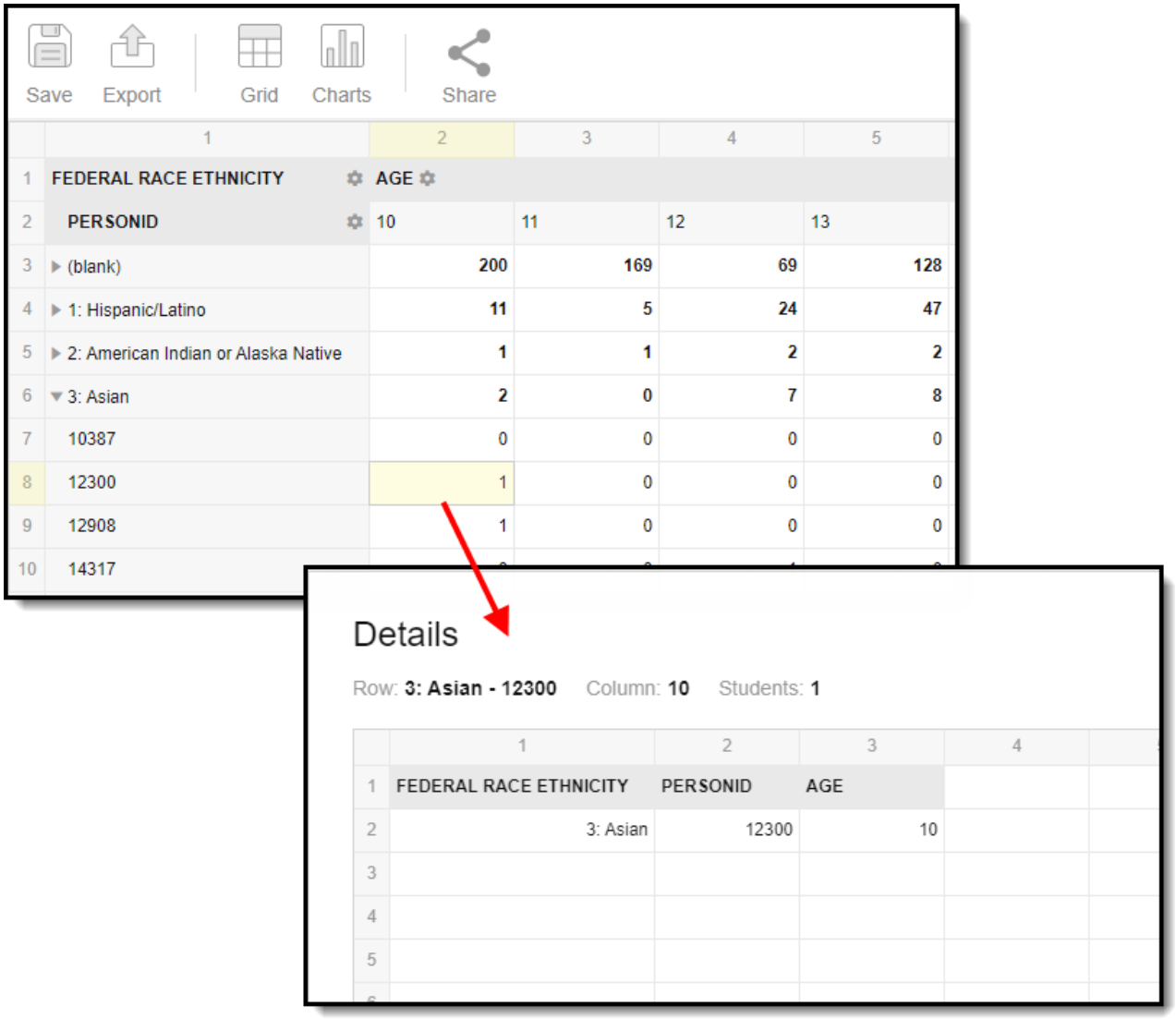


Image 10: Reviewing Cell Data

You can sort each row in ascending or descending order by selecting the arrow icon → next to the row name (Image 11).

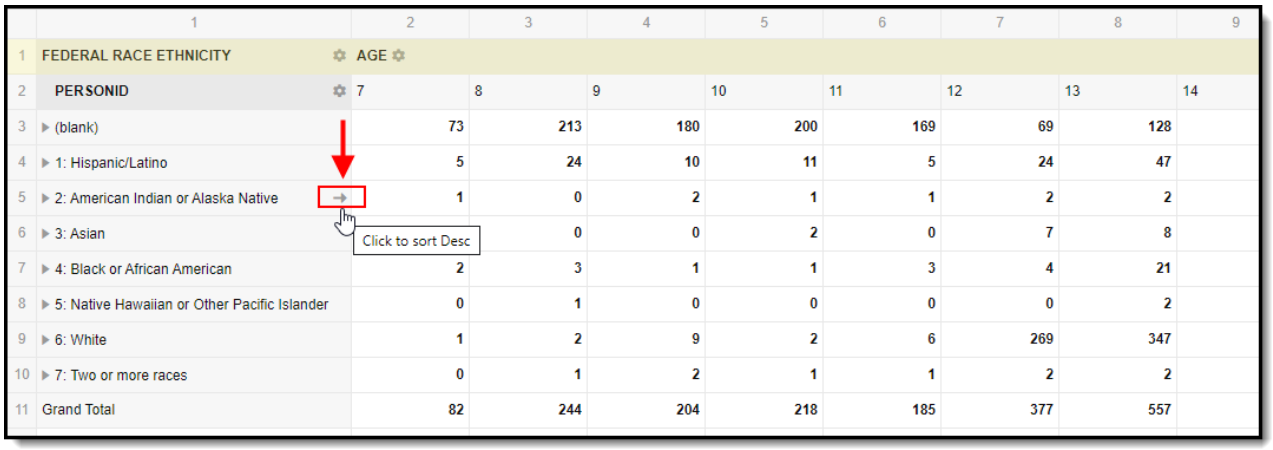


Image 11: Selecting Row Sort Order

You can also access additional options by right-clicking an individual cell (Image 12).

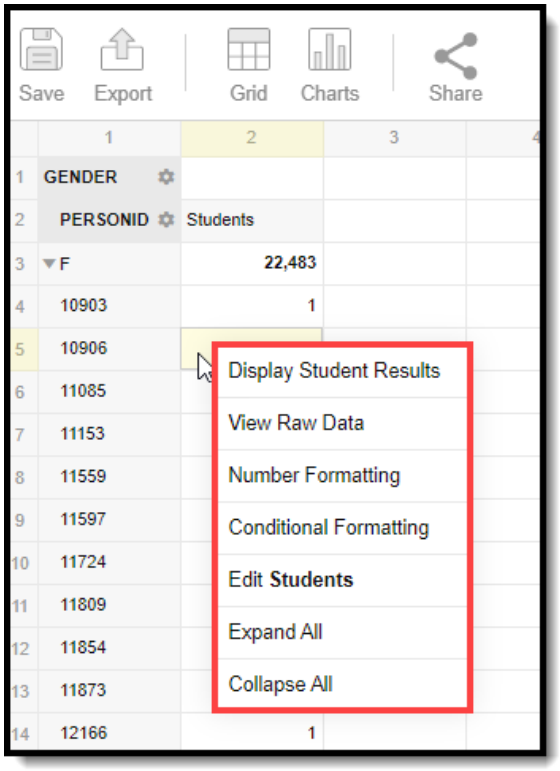
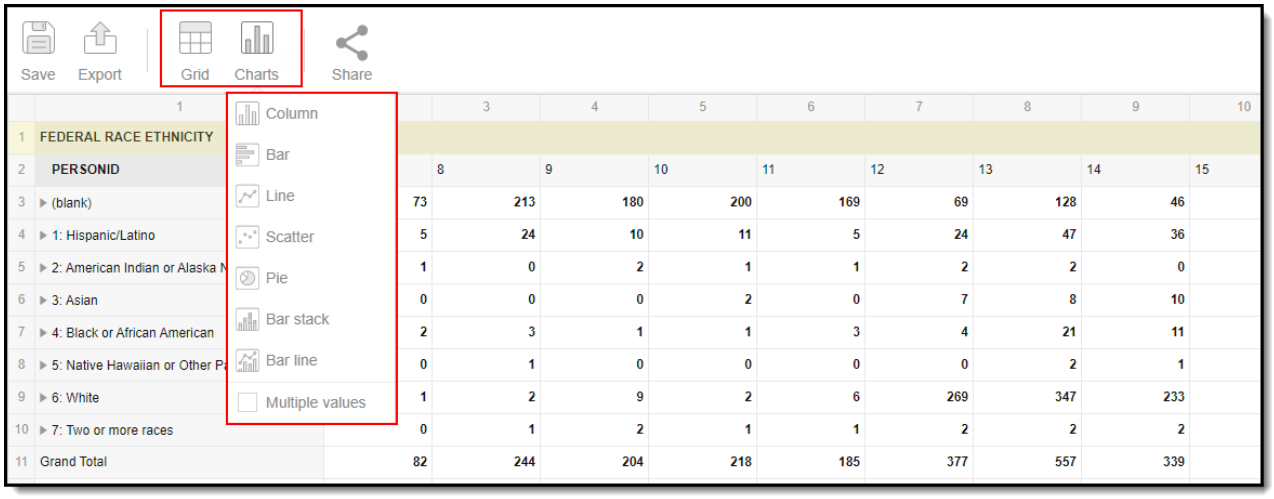


Image 12: Right-Clicking a Cell

Create Charts from Pivot Data

Pivot data can be visually displayed in a number of charts. To create a chart, click the **Charts** icon and select a chart type.

- Column
- Bar
- Line
- Scatter
- Pie
- Bar Stack
- Bar Line



	1	3	4	5	6	7	8	9	10
1	FEDERAL RACE ETHNICITY								
2	PERSONID	8	9	10	11	12	13	14	15
3	(blank)	73	213	180	200	169	69	128	46
4	1: Hispanic/Latino	5	24	10	11	5	24	47	36
5	2: American Indian or Alaska N	1	0	2	1	1	2	2	0
6	3: Asian	0	0	0	2	0	7	8	10
7	4: Black or African American	2	3	1	1	3	4	21	11
8	5: Native Hawaiian or Other Pa	0	1	0	0	0	0	2	1
9	6: White	1	2	9	2	6	269	347	233
10	7: Two or more races	0	1	2	1	1	2	2	2
11	Grand Total	82	244	204	218	185	377	557	339

Image 13: Chart Options

Column

The Column chart displays pivot data in vertical color-coded columns. Colors are defined in the legend at the bottom of the screen. To filter displayed data, select the gear icon next to a data element.

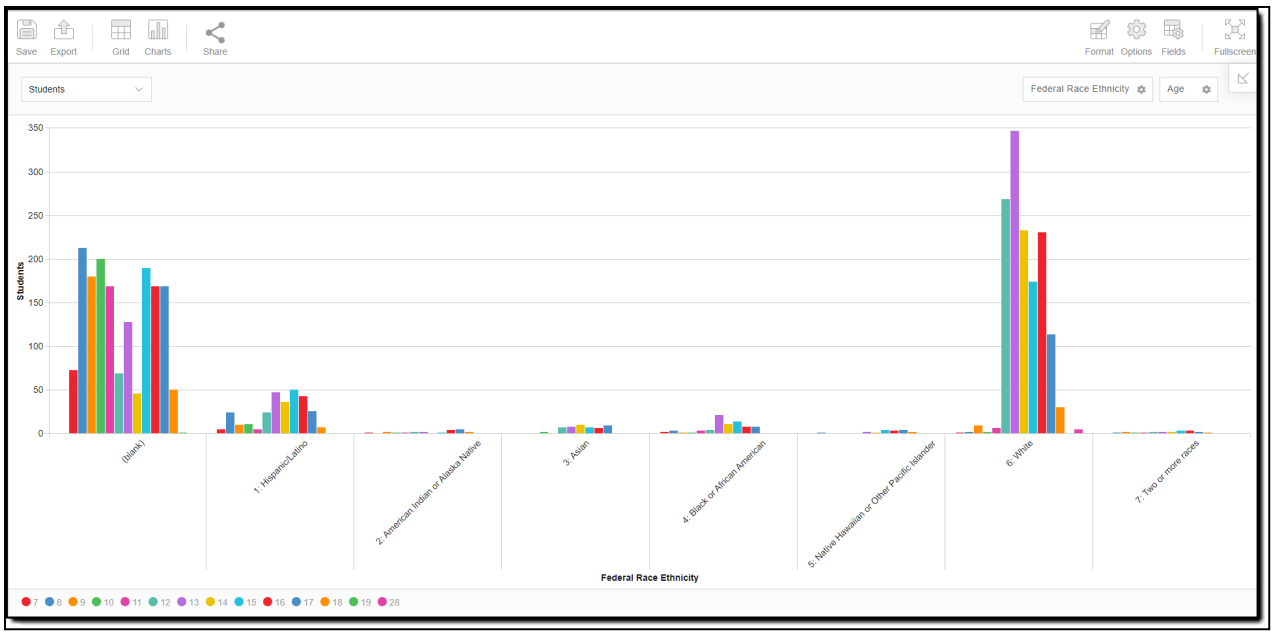


Image 14: Column Example

Bar

The Bar chart displays pivot data horizontally in color-coded columns. Bar charts work well for tracking changes over time.

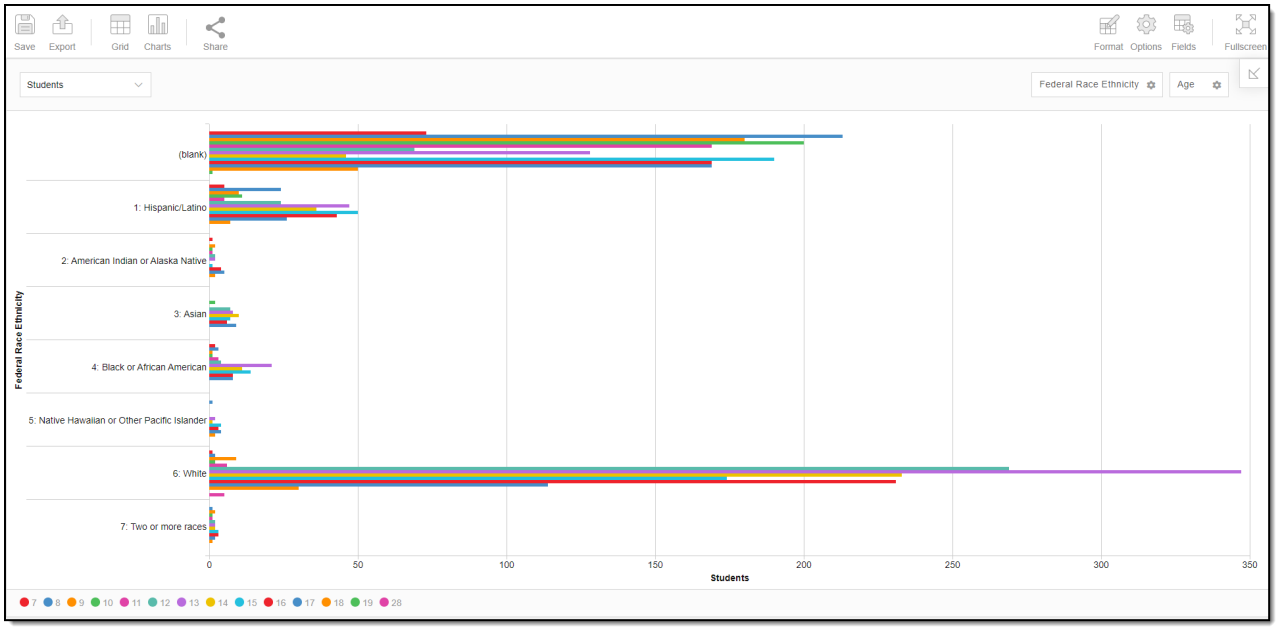


Image 15: Bar Example

Line

The Line graph displays pivot data using color-coded dots and lines. Line graphs are useful for reviewing changes over short and long periods of time, noticing spikes in data, and noticing trends.

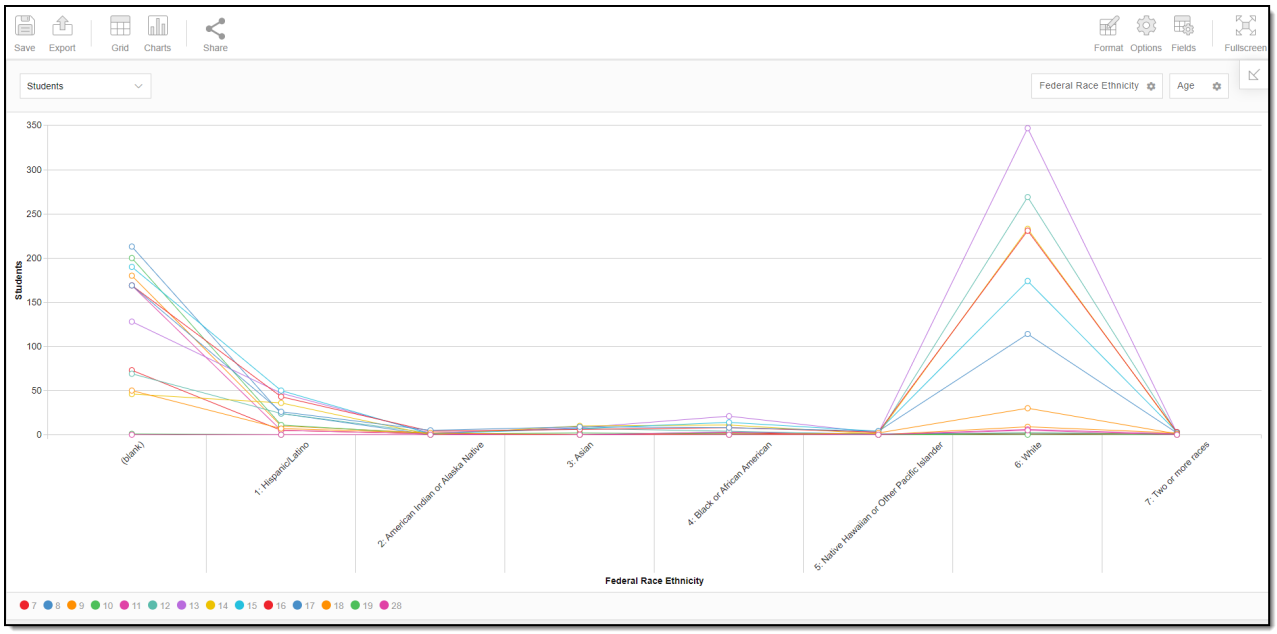


Image 16: Line Graph Example

Scatter

Scatter charts display pivot data in color and graphically-unique points. Scatter charts work best when comparing large numbers of data points without regard to time. For example, you might use a scatter chart to analyze the relationship between two variables such as a person's height and weight.

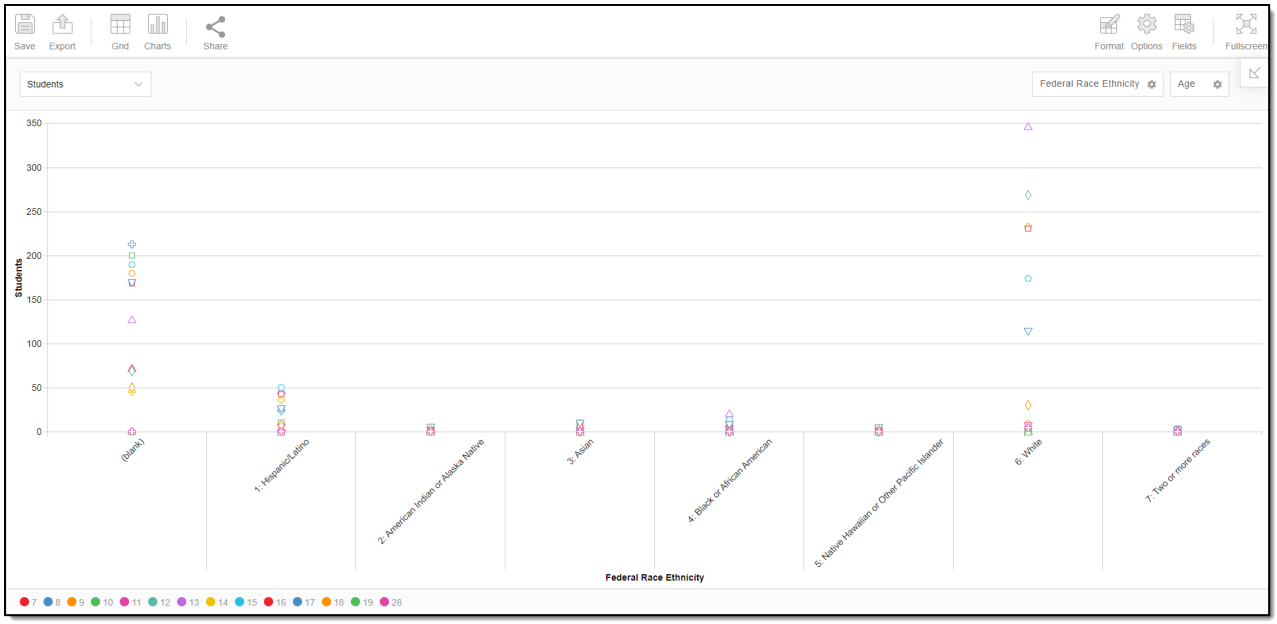


Image 17: Scatter Chart Example

Pie

Pie charts display pivot data in a color-coded circle, indicating how much each variable makes up a part of the whole. Pie charts are useful for understanding the size or impact one variable has compared to the others or to see how a variable has shrunk or grown over time.

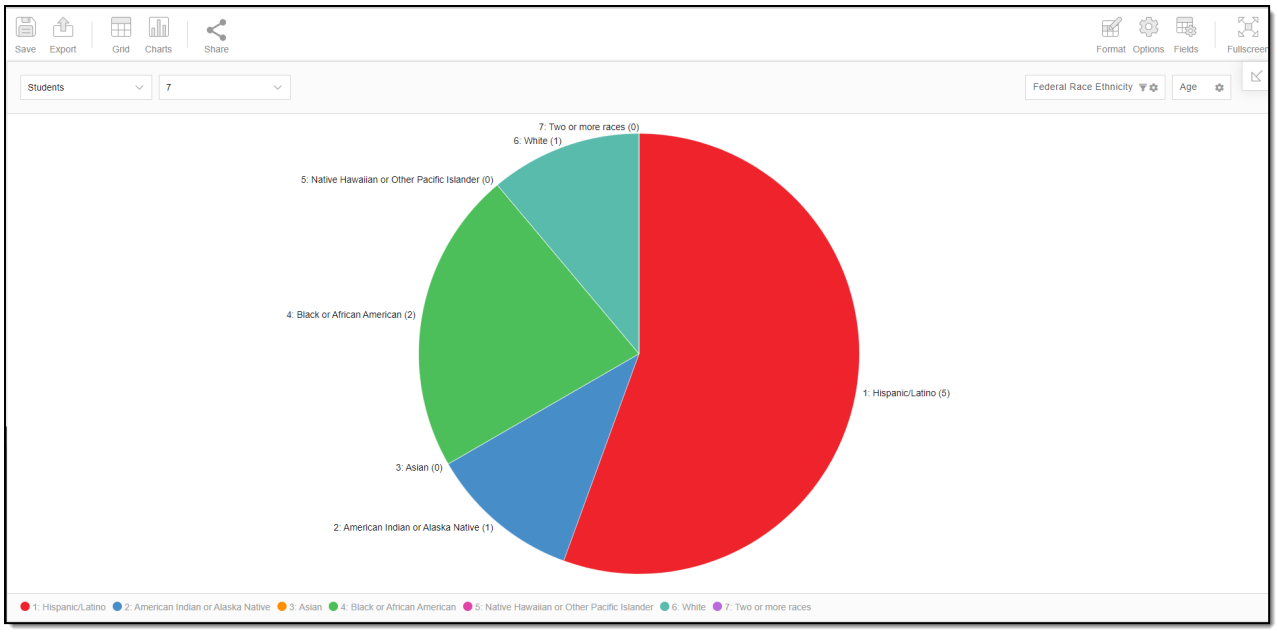


Image 18: Pie Chart Example

Bar Stack

A Bar Stack displays pivot data in color-coded bars representing how much each variable makes up a part of the whole for another variable. Bar stacks are useful for representing multiple types of data within a single bar.

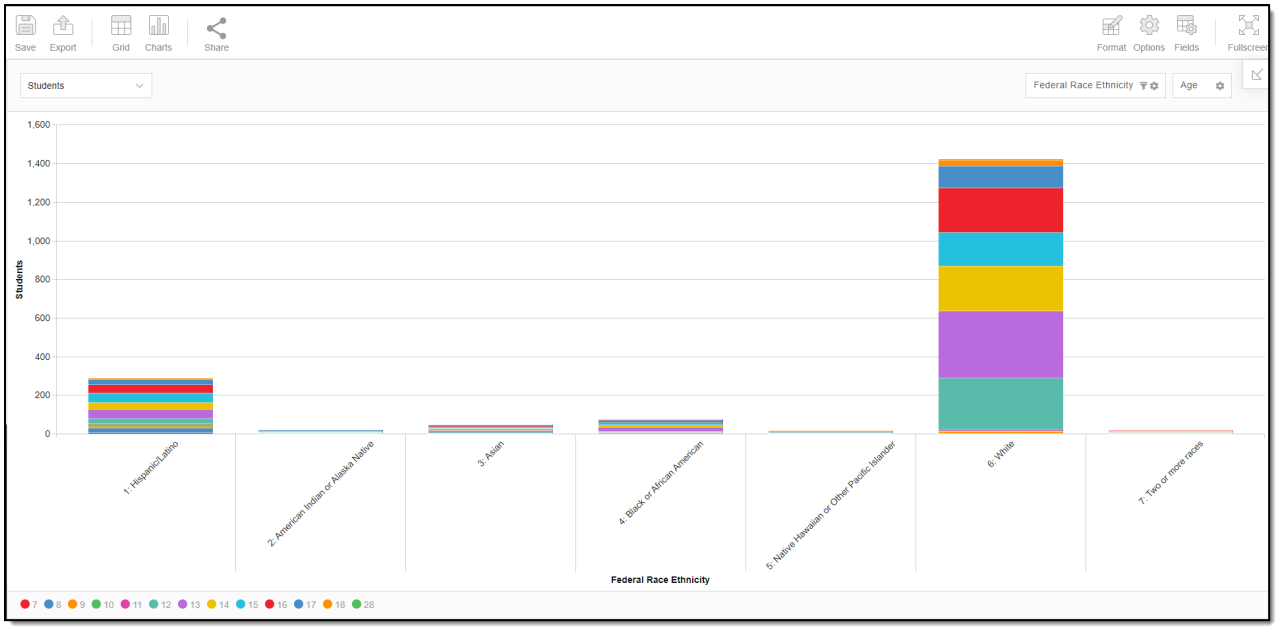


Image 19: Bar Stack Example

Bar Line

A Bar Line displays pivot data in vertical color-coded columns. Bar lines are useful for determining trends and the trajectory of data over time.

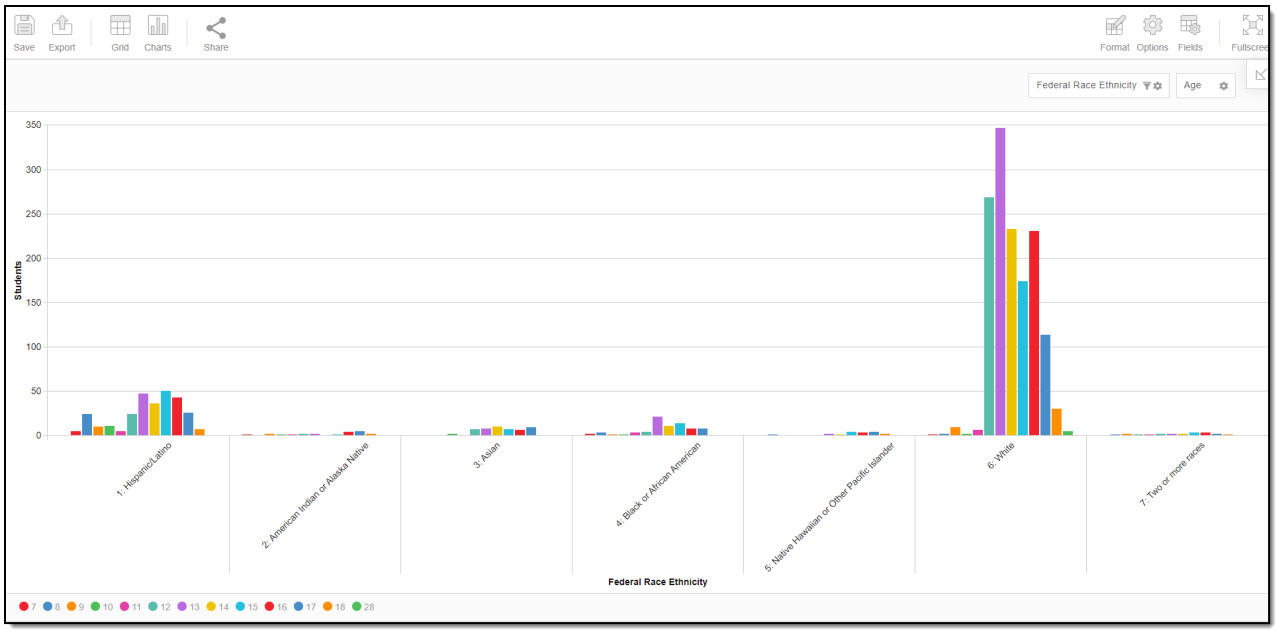


Image 20: Bar Line Example

Format and Layout Options

Format options allow you to modify how cells represent data within the pivot table. To access format options, click the Format button and select one of the following options:

- **Format cells** - This editor allows you to control how text within the cell is aligned, what value

is reported in the cells, how decimals are used, the current symbol used, any default null value you want the table to display, and whether or not you want data displayed as a percentage.

- **Conditional formatting** - This editor allows you to set cell value thresholds as to whether or not the data is reported for each cell (less than or greater than a certain value) as well as modify the cell text size and font.

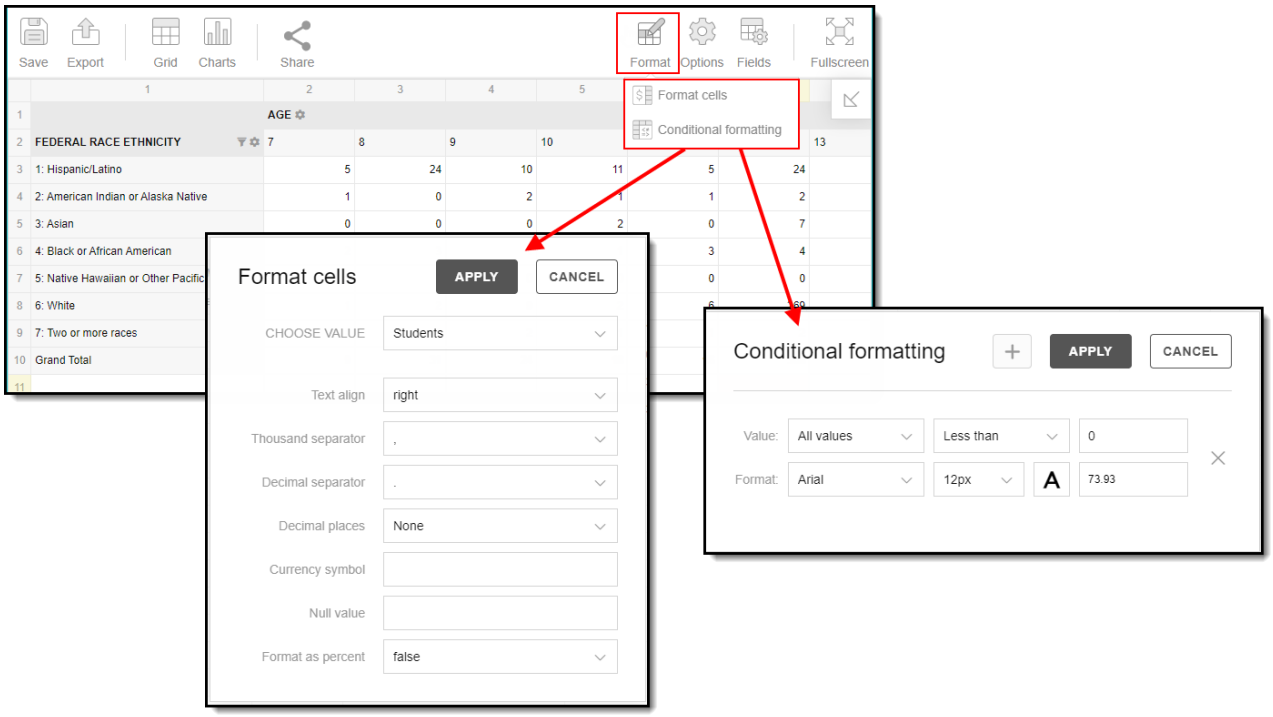


Image 21: Format Cells and Conditional Formatting

The **Options** menu gives you layout options for how you would like the table to be displayed (Layout), how grand totals are display in the table (Grade Totals), and how subtotals should be displayed (Subtotals) (Image 22).

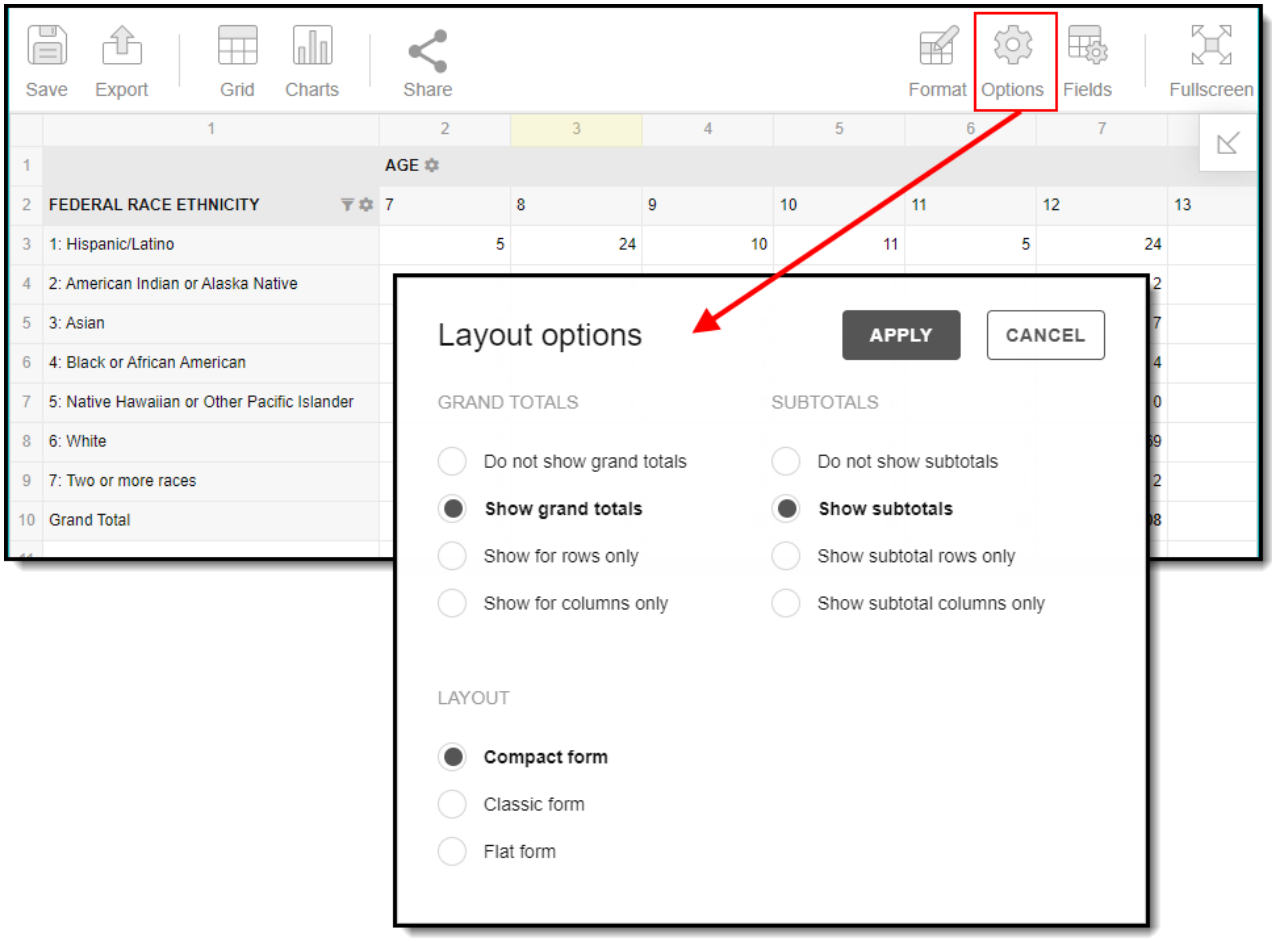


Image 22: Layout Options

Export and Share Pivots

Pivots can be exported to a number of different formats by clicking the **Export** icon and selecting an option (Image 23).

Pivots contain all data from the Effective Date entered on the Pivot Designer editor to the current date. Because of this, users are unable to do historical comparative analysis of data. Users are highly encouraged to export data periodically in order to facilitate comparative analysis.

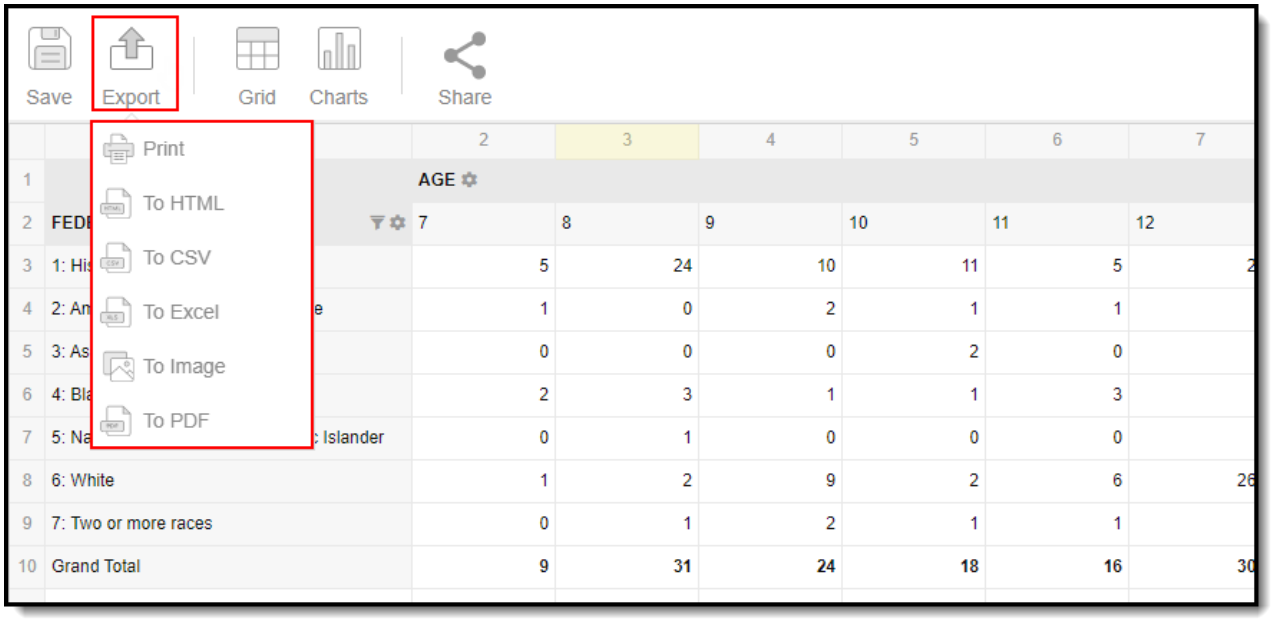


Image 23: Exporting a Pivot Table

You can also share your pivot with other Campus users by clicking the **Share** icon and selecting one of the following options:

- **Tiny URL** - Produces a short URL which is useful for texting or emailing to other Campus users.

  This option will not preserve any formatting or filtering done to the pivot table. Users will receive the data in the default pivot table format.

- **Current View URL** - Preserves all existing formatting or filtering done to the pivot table however, this URL will be much longer than the URL provided via the Tiny URL option.

Use caution when sharing a pivot with other users. Users working within or viewing a Pivot Designer report are able to see data related to tools for which they may not have tool rights to access (with the exception of FRAM). Calendar rights are respected as pivots will not display data tied to calendars for which a user does not have rights to access.

We recommend saving pivots to specific User Groups or as an Outline Link to control user access.

Users attempting to access a pivot table via a shared URL will need to first be logged into Campus in order to access the tool and have proper calendar rights in order to see reported data.

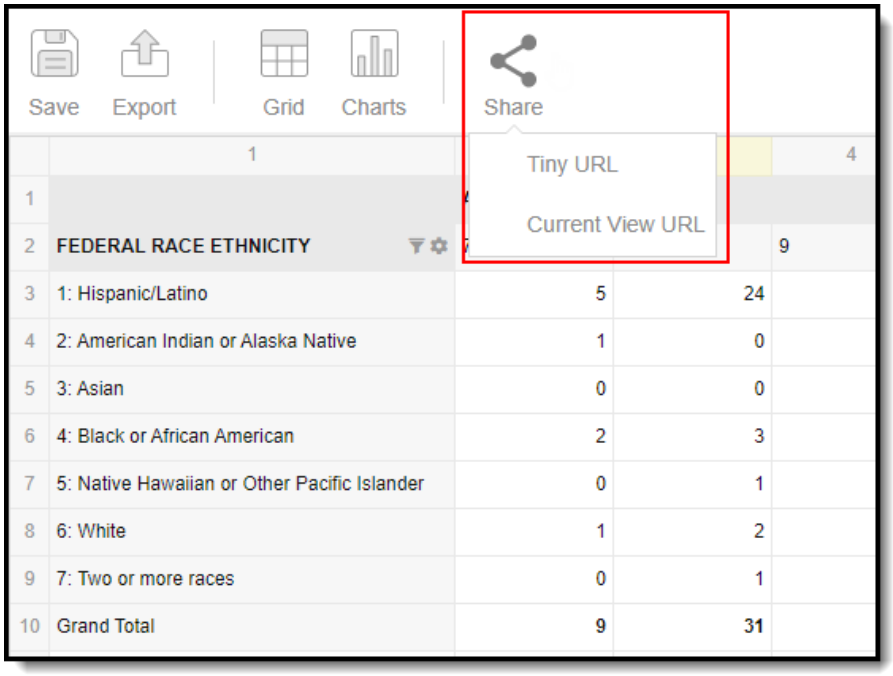


Image 24: Sharing a Pivot Table

View, Edit and Delete Pivots

To view an existing pivot, select the pivot from the Saved Pivots window and click the **View** button (Image 25). You will be redirected to the Pivot Designer tool, displaying the pivot and its corresponding data.

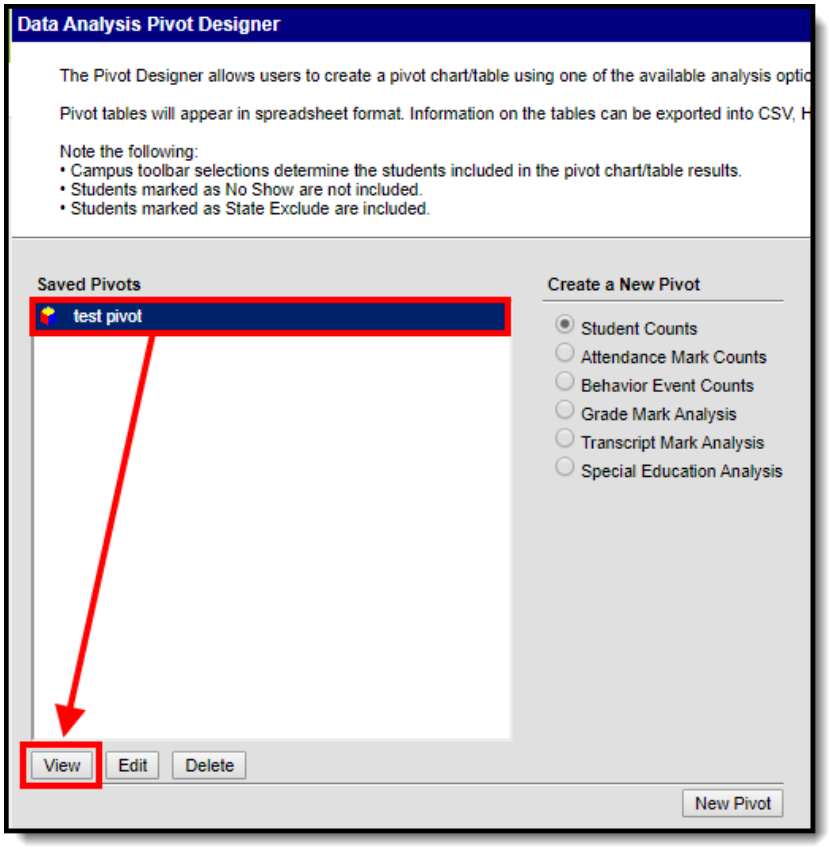


Image 25: Viewing an Existing Pivot

To edit an existing pivot, select the pivot from the Saved Pivot window and click the **Edit** button (Image 26). You will be directed to the Pivot Designer editor where modifications can be made to existing dimensions and field data. To save modified pivot field data select the **Save** icon. To view modified pivot data select the **Display Pivot** button.

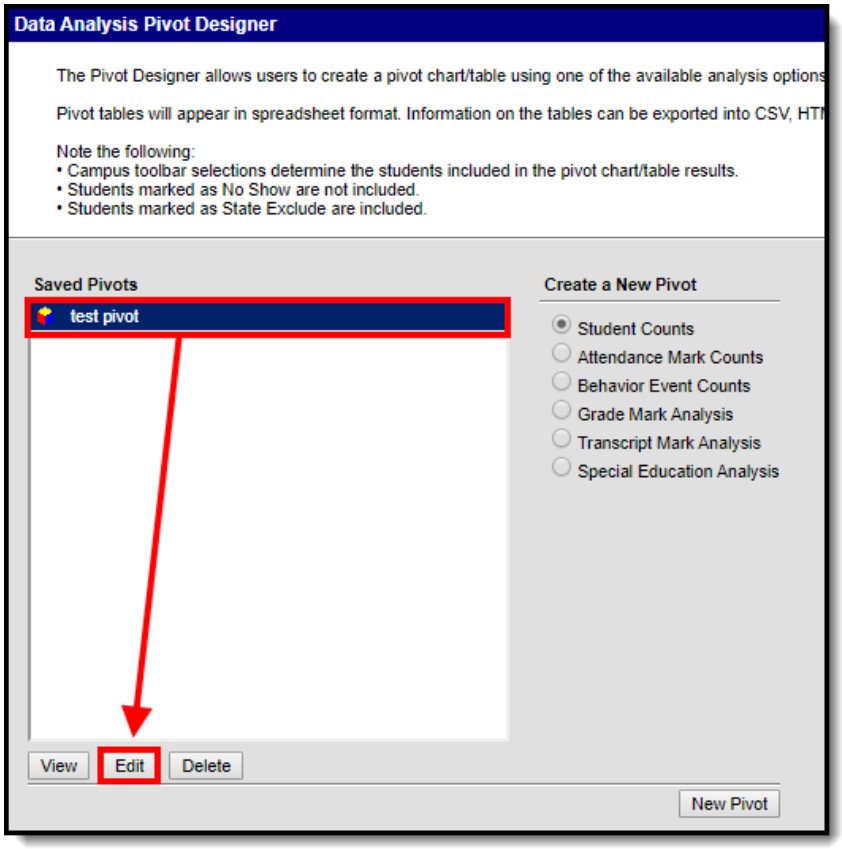


Image 26: Editing an Existing Pivot

To delete an existing pivot, select the pivot from the Saved Pivots window and click the **Delete** button (Image 27). You will receive a warning message. Select **OK** to delete the pivot or select **Cancel** to cancel the deletion process.

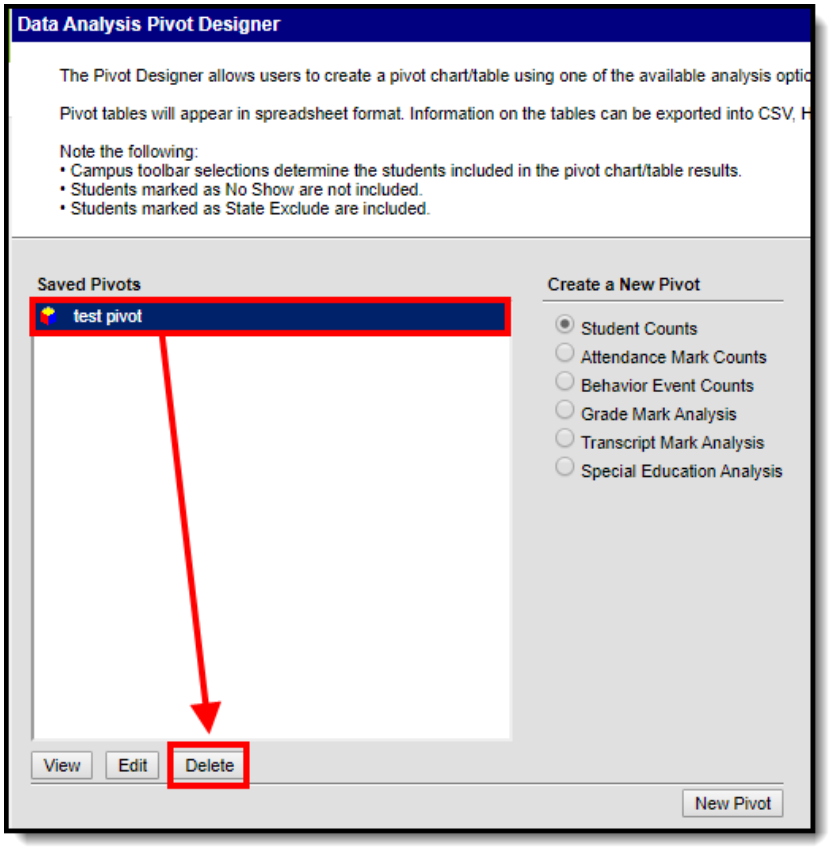


Image 27: Deleting a Pivot

Previous Versions

Pivot Designer [.2032 - .2112]