



### Ad Hoc Reporting

Release Pack 1845

Eastern Suffolk BOCES
December 2018

### Overview and Agenda

- What is Ad Hoc Reporting?
  - Canned reports provided by Infinite Campus are usually generalized, reporting the most common information required by the majority of Campus district users. Ad hoc reports allow you to pull user-defined detail information from several areas of Infinite Campus into one report. Many canned reports can also be filtered with ad hoc selections.
  - Today's activities:
    - Data Viewer report creation
    - Filter types and creation
      - Inserting a Function
      - Using the Add button and Deleting fields
      - Adding Logical Expressions to your results
      - Query Wizard result formatting
    - Data Exporting
    - Letter Designer creation
    - Letter Builder creation
    - Advanced Searching
    - Sharing filters in the outline

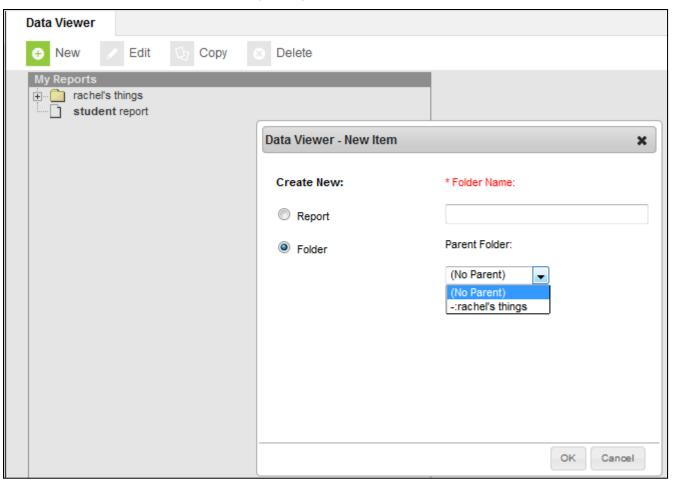
#### Ad Hoc Reporting> Data Viewer

- Data Viewer is a way to make simple reports without the complexity of the ad hoc query wizard. It doesn't have all of the query wizard capabilities, but it is easy to learn and then teach to a novice user.
- The reports use the same views as the more complex query wizard, based on the user's access rights: student, census/staff, or course/section.
- Reports save only to the useraccount (no sharing).
- Reports have the same basic functions as filters, based on the user's access rights: Edit, Copy, Delete, ability to sort in folders.
- Reports display in PDF, CSV, or HTML (webpage) formats.
- Reports can be displayed in comparison to an existing filter.



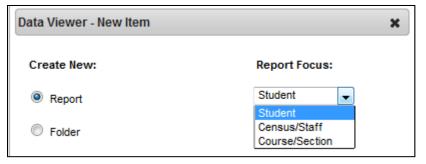
#### Click New

- Create a new folder.
- Folder
  - Name the folder and select whether it should be nested inside another folder.
  - Move filters and folders using drag and drop.

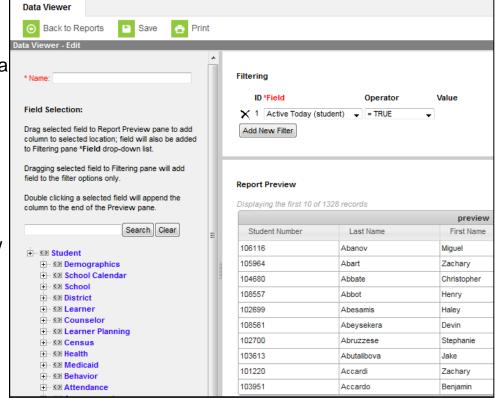


#### Click New

- Create a new report.
  - Select data set.



- Give the report a name (must be unique).
- The basic identifier fields are pre-selected based on your data set.
- Search for additional fields using search/clear boxes or by using expand/collapse plusminus boxes.
- Add fields by selecting using double-click or drop and drag.
- Filter fields by clicking Add New Filter; basic operators are available based on field data type. Functions and Logical Expressions tools are not available here.



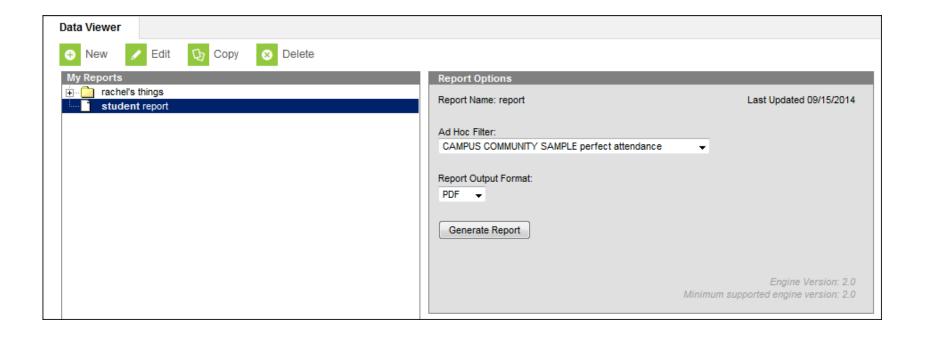
- Drag column headers to re-sort left to right order.
- Remove, sort, and group columns by clicking on preview-window column headers.
- Top ten results are displayed, report must be generated for full results.

preview			
Student Number		First Name	Start Status
106116	▲ Sort ASC	Miguel	0011
105964	▼ Sort DESC	Zachary	0011
104680	팀 Group By Column	Christopher	0011
108557	➤ Remove Column	Henry	0011
102699	Abesamis	Haley	0011
108561	Abeysekera	Devin	0011
102700	Abruzzese	Stephanie	0011
103613	Abutalibova	Jake	0011
101220	Accardi	Zachary	0011
103951	Accardo	Benjamin	0011

- Tool selections are Back to Reports (navigate away,) Save, and Print.
  - Print saves the report similarly to "save and test." Print from the report creation or "edit" view defaults to a PDF print with the report header field.

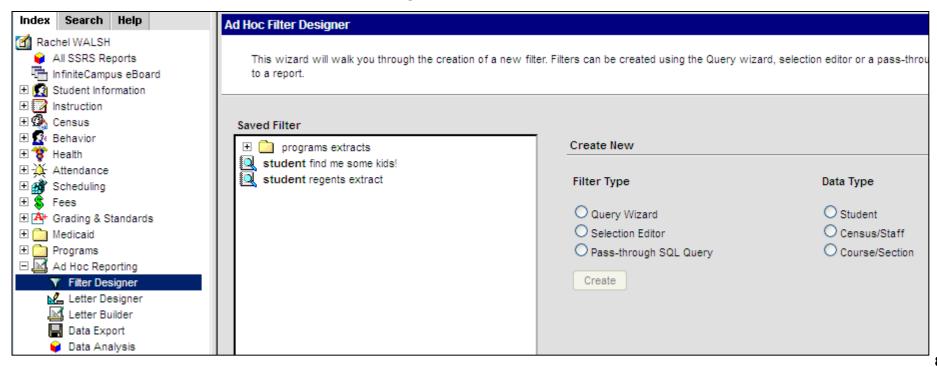


- Once a report is saved, it can be re-used to print, copy, or be deleted. The user may reprint the report by filtering with an existing Query Wizard filter.
  - Select the report. Select the ad hoc filter name (if desired) and then choose an export format. Click Generate Report.
  - Calendar selections are less strict with Data Viewer, however, opposing calendar selections (header calendar vs. filter calendar) may cause some report issues.



## Filter Designer

- Query Wizard create a dynamic (real-time) filter by selecting specific data fields to be used for generating custom reports, report cards, mailings, etc.
- Selection Editor select a static (unchanging) group of students for whom a report/letter can be run.
- Pass-Through SQL Query use with basic SQL programming language and Campus schema knowledge to build queries from the three data sets.
- Three data set return options: Student, Census/Staff, or Course/Section (based on users' access rights).



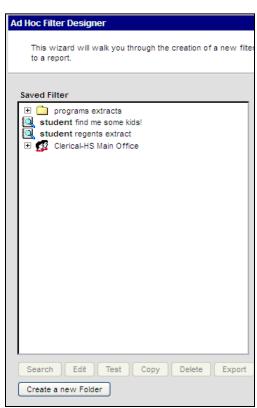
### Filter Designer

- The Saved Filter window displays your (accessible to you only) User Account ad hoc folders, then individual filters, and then shared filters (based on your user group memberships). Shared filters, once altered, are altered for the whole group.
- An empty folder can be created by entering a unique name, and folders may be nested within other folders. Folders can't be created within a shared "user group".

 Filters may be edited, tested, copied, deleted, exported and displayed based on user tool right access.

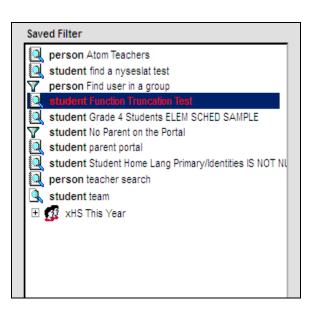
- A filter must be selected for the "action buttons" to become active.
- Results populate in the Index from the Advanced Search tool within Student (student filters), All People (census/staff filters), and Course/Section (course section filters.)





### Filter Designer

- A filter containing a deprecated field will display in red. It will still be
  operational, although the deprecated field info will only be historical,
  since no new data can be saved to the field.
- If you have an ad hoc created to which your tool rights don't allow "read" access, it will generate an error message titled "Security":
  - Security: Filter contains data that requires one of the following rights: [Student Information > Health > General > Medications, Student Information > Health > General > Health Visits]. Please contact your System Administrator.

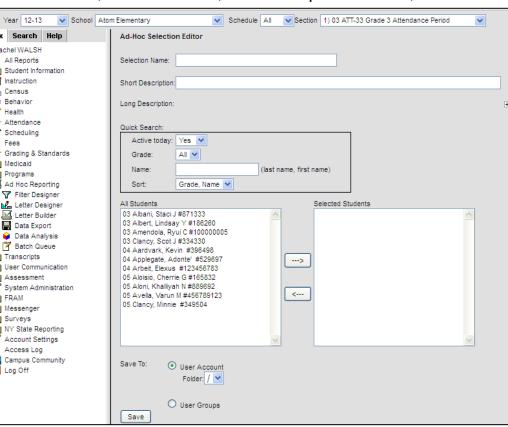


#### Selection Editor

#### Ad hoc Reporting>Filter Designer>Selection Editor

- Student and Census/Staff are the only available Data Sets in this mode.
- Student selection options are driven by the header calendar in which the filter is created.
- Unique name required, description text are boxes optional. A best-practice is to add the calendar name
  where the filter is created if based on student. This will display on the "saved filters" screen when
  hovering with the cursor.
- All students contained in calendar are displayed ("no-shows" are excluded!!!). Quick search options
  narrow the selection list.
- Click and use ← L/R → Arrows to move students, or hold CTRL, click multiple students, and move once.
- Save is the only option, no data filtering is available in this list.





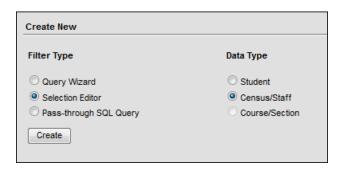
#### Selection Editor

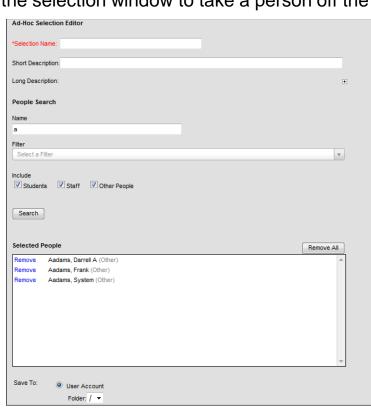
#### Ad hoc Reporting>Filter Designer>Selection Editor

- Student and Census/Staff are the only available Data Sets in this mode.
- Census/Staff data set options are driven by census and not limited to the selected calendar.
- Unique name required, description text boxes are optional. This will display on the "saved filters" screen
  when hovering with the cursor.
- A portion of the name needs to be selected in the text box, or you may select from an ad hoc filter which
  has already been created, or a combination of the two the two search fields work in conjunction with
  one another.
  - i.e. if you search a staff member's name and a student filter at the same time, you will receive 0 persons.

Click the Add button to add the person to the selection editor list. Clicking the blue name link will display
the person summary report. Click the blue Remove link in the selection window to take a person off the
list.

- Each name will have a description of whether they're Student, Staff, or Other
- Save is the only option, no data filtering is available in this list.

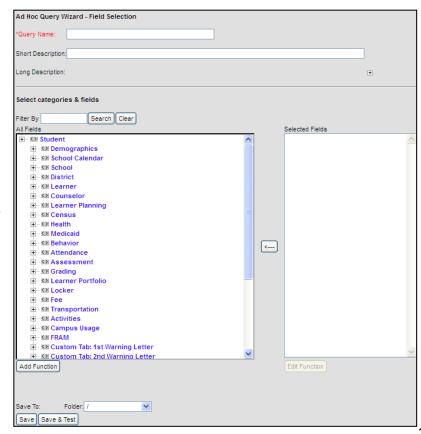




# Query Wizard - Creating a New Filter

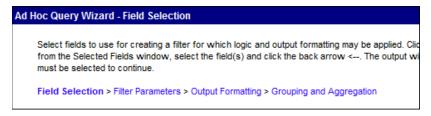
- Choose Filter Type and Data Type, then click Create. Your school year and calendar selections will affect your result set output.
  - Unique name required, description text boxes are optional. This will display on the "saved filters" screen when hovering with the cursor.
  - The modules are available based on your initial data set option (student, census, or course.) Each module contains multiple fields to select.
  - Filters can only pull information saved in the database (for example, you can not create a filter to find a student who has never had a FRAM eligibility, because that studentID does not exist in the FRAM records.)
  - Expand the module and click the field name to use it in your filter. To remove a field, highlight it from the "selected" box and click the left arrow button (center.)

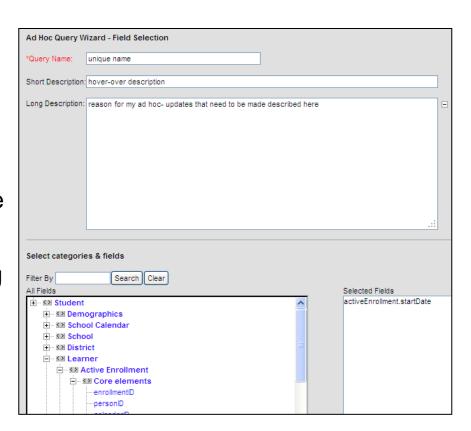


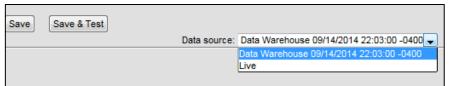


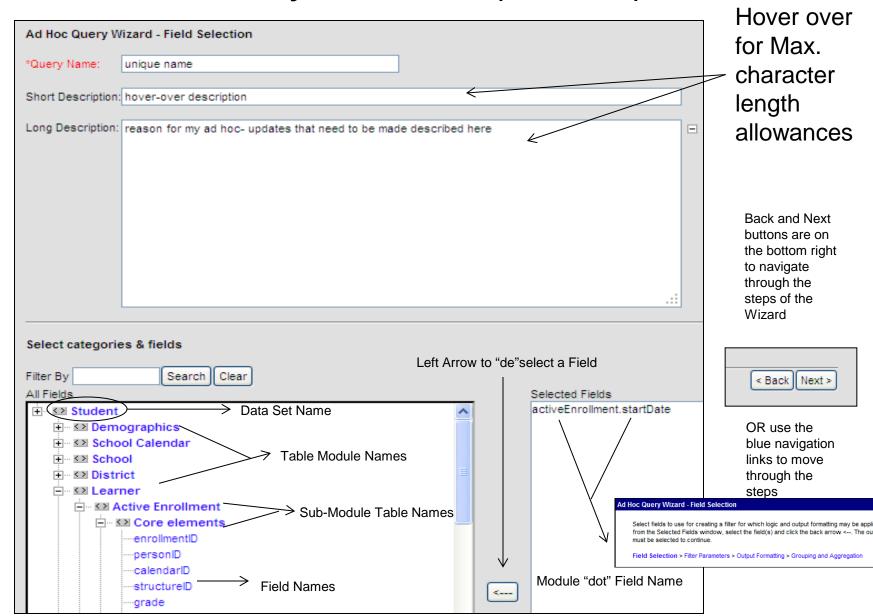
### **Query Wizard**

- Query Wizard Filters are dynamic and will pull current information from the database.
  - Districts using Tableau third-party software will have an option whether to use Data Warehouse data, or live.
- Fields are organized in a format similar to the tab set modules from the index.
- The "Filter By" search box will narrow the field list to any modules containing your entry. The Clear button will return to the full display of field options.
- Once fields are selected, the header bar has blue links to navigate throughout the Query Wizard (this helps avoid scrolling L/R/Up/Down for users who have zoomed in the view on their browser.)



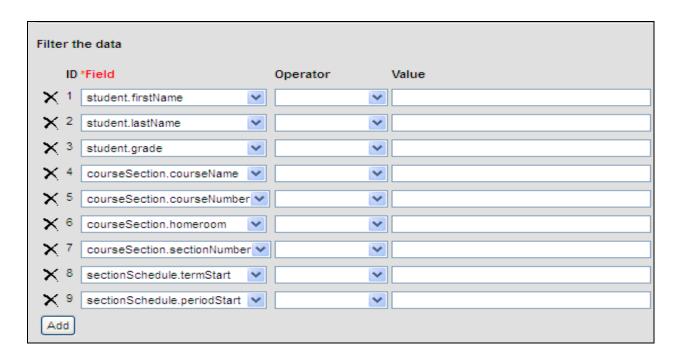






- Parameters uniquely filter each field while maintaining the filter structure.
  - see additional document for operator definitions and use
  - users can employ the following wildcard for searches:
    - % percent sign can be used for an unknown string of values
      - SEARCH > module.lastName = "R%z" will return Rodriguez, Ramirez, Ruiz, Rodenzo, Randazzo, etc.
    - underscore can be used for a single unknown value
      - SEARCH > module.lastName = "Rodri\_uez" will return Rodriguez, Rodriguez
    - other wildcards exist, but aren't commonly used
      - ['x"y'] items encased in brackets will return only those values
      - [^'z'] bracketed and careted values will not return

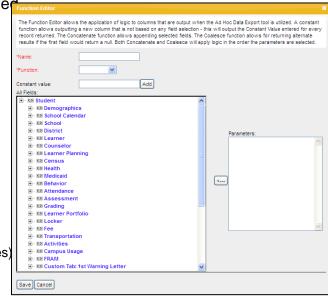
- Filter Operators allow a user to define specific constraints about how each field is reported within the filter.
- There is also an Add button to re-use operators on a field multiple times (i.e. grading.score <= 64, grading.score <> 100, grading.score LIKE F).
- Enter the definition information in the Value field.



### Inserting a Function

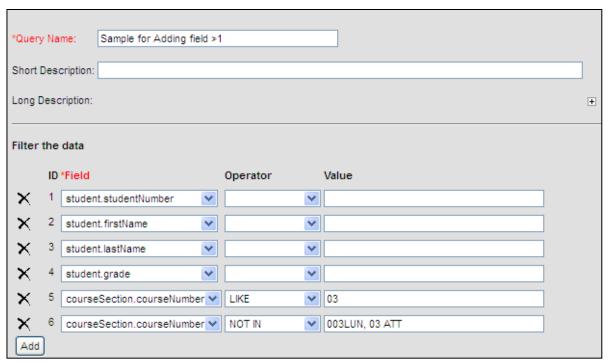
- You can add a function to perform tasks in a result column
  - Enter a name for the function. This will serve as the field name.
    - · Can contain spaces but not 'special characters'.
  - Choose a function.
    - Constant creates a new column with a fixed value
      - Enter "constant" value into the text field
    - Coalesce "substitutes" one field for another if the initial field return IS NULL (max 5 fields)
    - Concatenate merges the values from two fields/columns into one return column (max 5 parameters)
    - Add, Subtract, Multiply, Divide mathematical functions between at least two numeric fields
      - For all functions containing multiple field components, each must be selected and entered into the Parameters box.
    - Record Count number of returned records
    - Distinct Count number of unique (non-repeated) returned records
    - MIN returns the "lowest" value of this field for all records returned
    - MAX returns the "highest" value of this field for all records returned
    - SUM returns the sum of the numeric values contained within this field (numeric fields only) per unique ID\*
    - AVG returns the average of the numeric values contained within this field (numeric fields only) per unique ID\*
  - Any function may be edited by highlighting the function.name "field"

\*If there are repeated records in the return set, ad hoc will sum and average ALL records, not only those that are unique. i.e. extracting credits earned sum along with two guardian contacts will result in double the sum of the credit value (double the rows, double the values)



### Using the Add Button and Deleting Fields

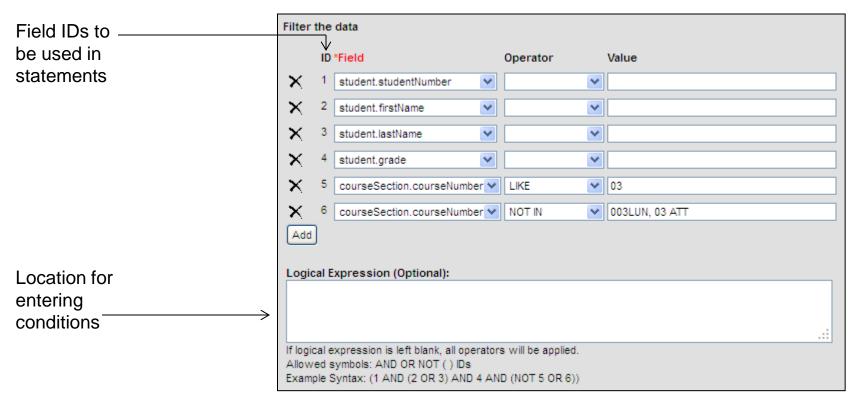
- You may add a field multiple times within the same filter, so multiple definitions may be used against it
  - In the example below, the user can find all third grade-linked courses, but can exclude the "lunch" and "attendance" courses.



- You may also delete repeated fields from your results by clicking the "x" next to the field ID. If a non-repeated field is deleted from display, it will still be available in the list from step 1 of the Query Wizard, and you may return it to the result set by choosing it from the list under "Add".
  - All selected fields "tie in" records, the deletion will not display a different result set until it is removed from the Selected Fields list.

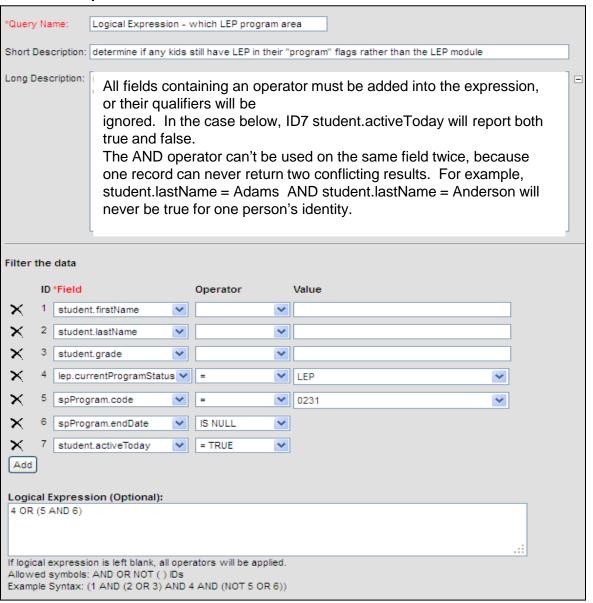
### Adding a Logical Expression

- A filter can be tested and re-tested using the Logical Expressions text box
- Fields are referenced by their field IDs, and not the field names
- ()Parentheses must be used for grouping, and only the SQL expressions AND, OR, and NOT may be used in this field
  - AND means all conditions must fit the statement
  - OR means only one condition needs to fit the statement
  - NOT means the condition must not fit the statement

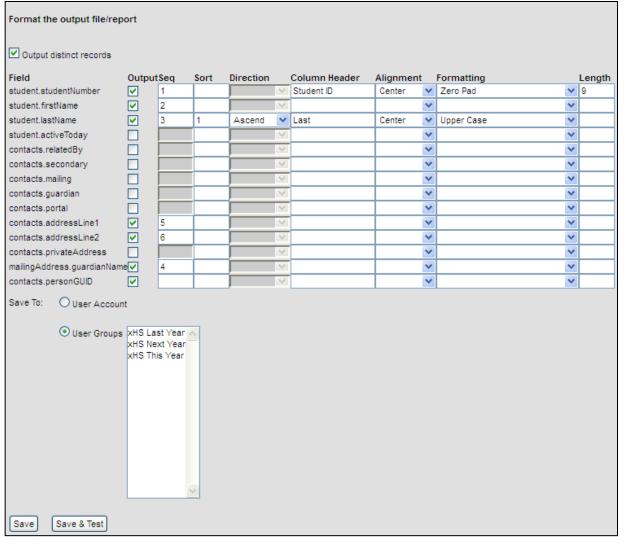


### Adding a Logical Expression

A sample filter

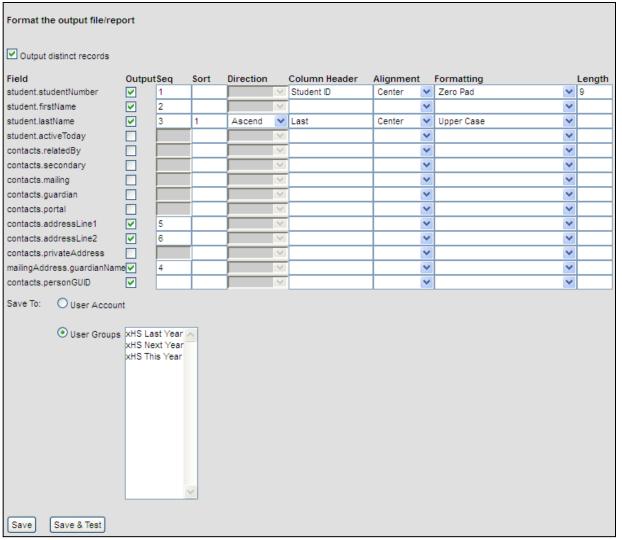


 Output Formatting allows users to control how each field will be reported and displayed when exported.



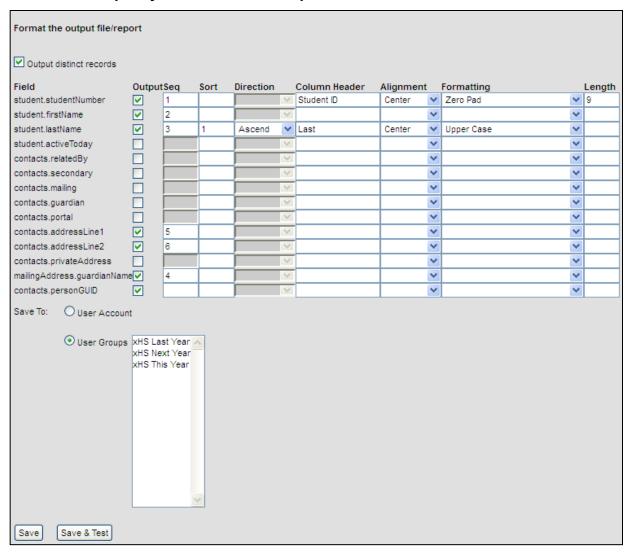
- Output determines whether or not a column will display with the data results. The filtering criteria is still factored into the ad hoc results.
- Sequence displays the columns (numerically) left-toright if you want to change the field order in the results
- Sort will sort the result data alphanumerically in the numeric order in which you choose (i.e. sort last name 0-##-A-Z, then first name 0-##-A-Z. Without sorting, the ID columns are the primary sort - in this filter's case, studentNumber.)
- Direction is Ascending (low to high) or Descending (high to low Z-A-##-0)

 Output Formatting allows users to control how each field will be reported and displayed when exported.



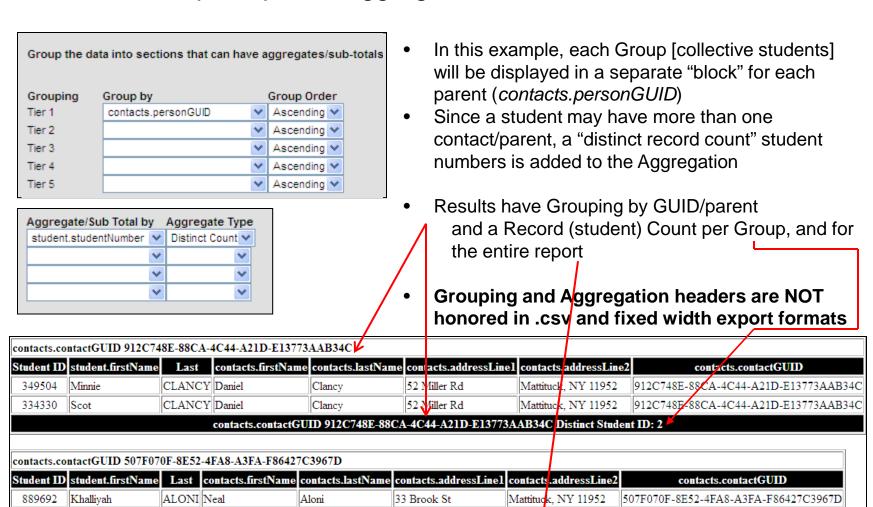
- Column Header replaces the field name with the text entered.
- Alignment determines what justification the column header and result data displays (left, right, center)
- Formatting allows you to change the spacing, padding, and text formatting of the results, and Length applies to Fixed Width export formatting only (isn't honored in HTML, .CSV, etc.)
- If data is <u>exported</u> using the Fixed Width format, fields with the Output checkbox checked should have a Length value entered

 Output Formatting allows users to control how each field will be reported and displayed when exported.



- Output distinct records will report only those records WITHOUT duplicate field results. For example, a "grayed out" (with Output unchecked) field may be different, while all of the "displayed" fields are identical. This will eliminate the duplicates.
- Users must have pop-ups enabled on the web browser in order to view Test results
- Filters can't be saved to multiple users or user groups. Each must have a separate stored copy so alterations may be made without affecting another group.

 The Grouping and Aggregation editor allows users to group fields into sections and report specific aggregates/sub-totals for each section.

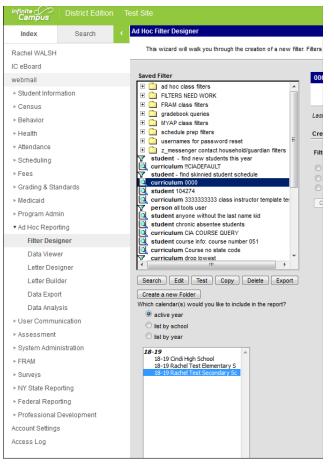


contacts.contactGUID 507F070F-8E52-4FA8-A3FA-F86427C3967D Distinct Student ID: 1

All Records Distinct Student ID: 11

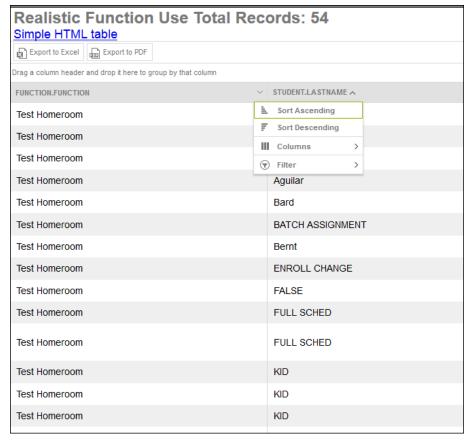
### Re-Using Saved Filters

 When selecting a saved filter to enable "action buttons", Campus displays a calendar picker below the saved filter window. This defaults to the calendar selected in the header, but will override the calendar header if the selection is changed. Click and drag or CTRL+click to select multiple calendars from the list.



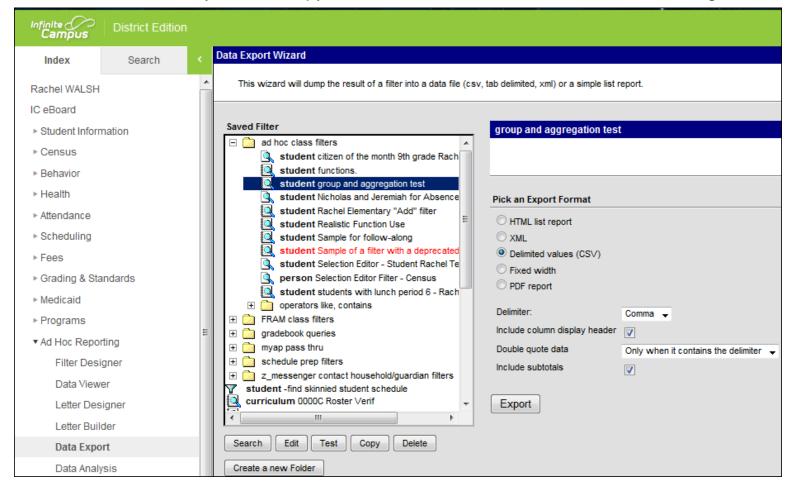
### Re-Using Saved Filters

 When testing a filter, Campus will display any non-formatted filter in a mobile-friendly view. It uses the same sort, hide, and filter functions as a spreadsheet program, as well as the option to 'group by' when using click-and-drag on the column headers. It also has options to display as an HTML table (traditional popup), to export to Excel, or to export as PDF.



# Data Export Ad Hoc Reporting>Data Export

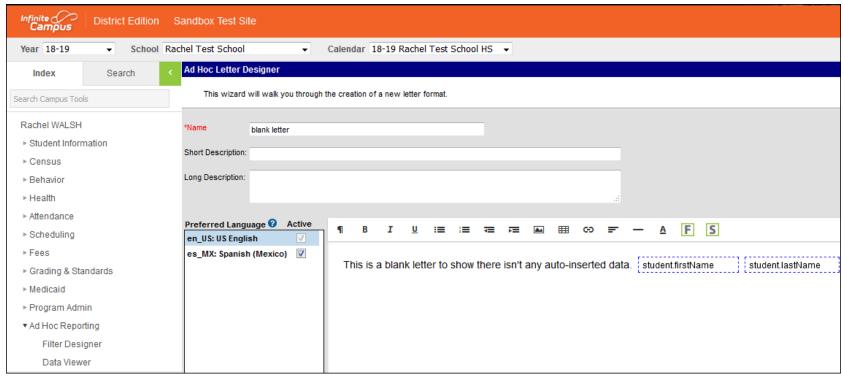
- Allows users to view the results of Ad Hoc filters created via the Filter Designer in multiple report formats and files. The Data Export fields include: HTML list report, XML, Delimited values (CSV), Fixed Width, PDF report.
- Users have the ability to Edit, Copy, and Delete from this tool based on the user rights toolset.



### Letter Designer

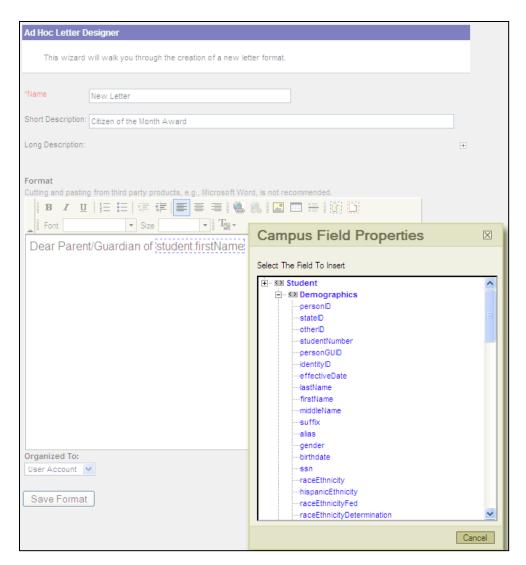
#### Ad Hoc Reporting>Letter Designer

- Ability to select either a Blank or Addressed Form Letter
- Letter templates are user-specific and can also be saved to shared ad hoc User Groups.
  - It's helpful to indicate the filter to be used with the template, to avoid printed letters for the wrong student(s).
- Highlight saved letter name to Edit, or click New Format to create a new template.
- Letters can be created in each Census> People> Demographics> Personal Contact Information> Preferred Language option, and will be auto-selected by recipient's [guardian's] language field.
  - English is selected automatically, other languages must be marked active before the letters will populate in an alternate (saved as draft until activated).



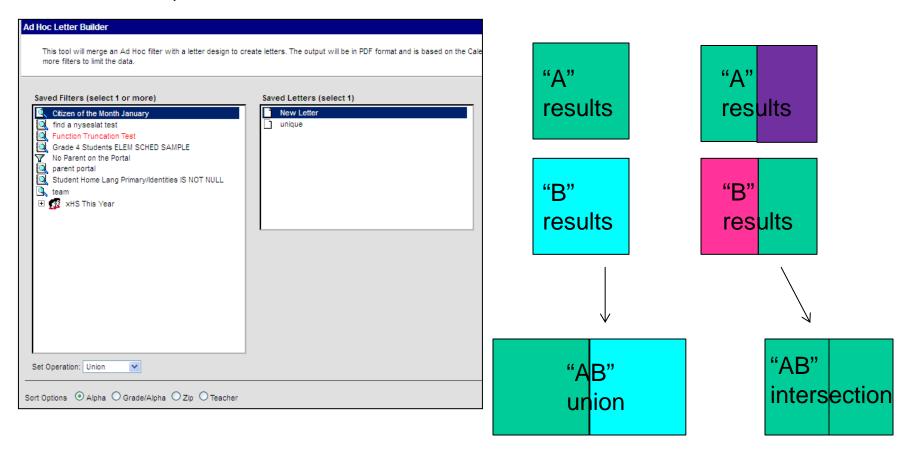
### Letter Designer

- Free-text type the letter body
- Click the "Link" icon (Campus 'barrels' in the blue dashes) in the HTML editor bar to insert customized school and student/census fields into your letter.
- Click the "Document" icon (Campus 'paper' in the red-dashes) to add a student-specific sub report to the letter. Choices are: Schedule, Attendance, Grading, Behavior, GPA/Class Rank, Immunization, and POS Account Balance reports.
- When finished formatting the letter, choose whether to save to your account or share in a User Group, and click Save Format.



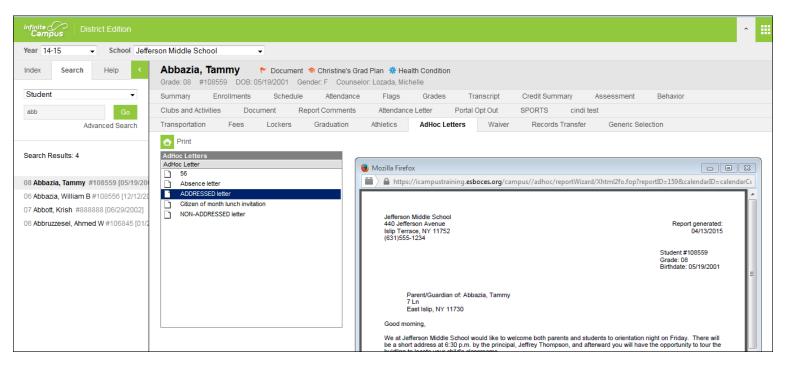
#### Letter Builder

- Allows users to create letters combining Ad Hoc Filters (Filter Designer) with saved Letter Designer templates to create multiple student letters based on filtered student data.
  - More than one saved Ad Hoc filters may be selected. Users select one of two set operations:
    - Union Combines 2 or more filters by appending one to the other. (Includes all results from Filter A and all results from Filter B)
    - Intersection Locates only data that is reported in BOTH (ALL) filters. (Includes ONLY results that are repeated on Filter A and Filter B.)
- Different sort options are available for ease of distribution.



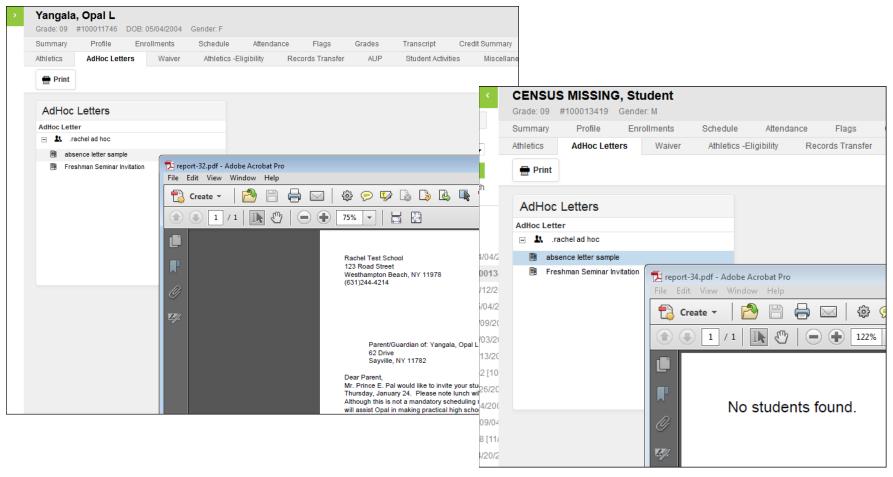
#### Letter Builder

- Letters are created in PDF format, and are generated based on the calendar selection in the header (an ad hoc locating 3rd-grade students will not generate letters when the High School is selected in the header.)
- Letters generated using this tool will be saved in Student Information>General>Ad Hoc Reports and can be regenerated individually from that student's tabset.
  - If the letter contains a Campus field that isn't applicable to the student (i.e. "termsAbsences" and the student has zero,) the report will remove the student from the list or print with "No Students Found" in the text body (if there is only one student in the filter). Sub-reports print student name only, without sub-report data.



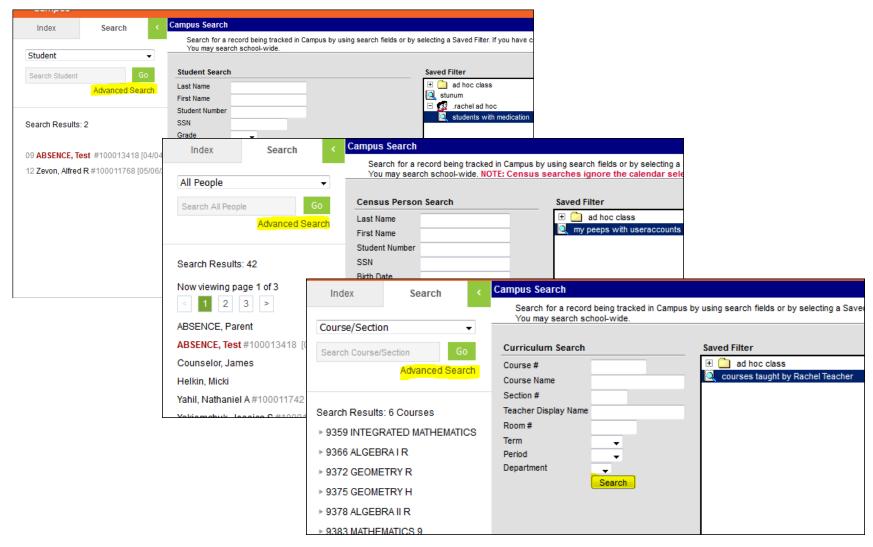
#### Letters in Student Information

- Ad hoc letters are available in Student Information> AdHoc Letters tab, based on user rights.
  - Letters must be created by the user or accessible through a shared group.
  - Shared letter titles should contain a description (i.e. the "Freshman Seminar" letter should not be printed for tenth-grade students).
  - If a letter contains a data field not applicable to the student, the letter will generate "No Students Found".



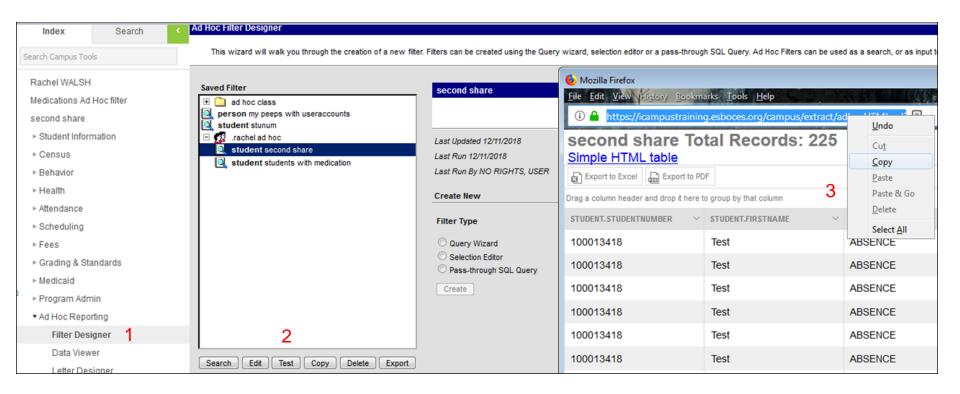
#### **Advanced Search**

 Advanced Search allows a user to populate the index with the filter's unique IDs, based on the source of the filter.



#### Share a Filter in the Index

- Embed a frequently used filter in the Index through Sys Ad> Custom> Outline Links tool.
- Create the filter.
- Save and Test.
- Select all and copy the entire URL from the result window's browser bar.

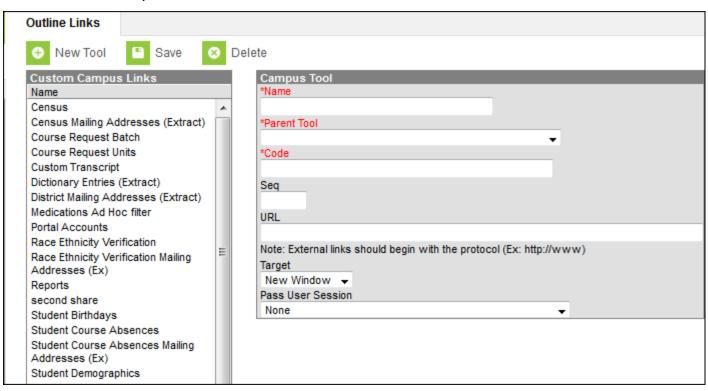


#### Share a Filter in the Index

- Index> Sys Ad> Custom> Outline Links> New Tool.
- Paste the URL in the text field.
- Give the tool a unique name.
- Give the tool a unique code value (to display on hover-over).
- Select a Parent Tool from the tool tree.
  - Make sure it is a folder, and not an existing outline link. Otherwise, there's a warning message:

Warning! The selected Parent Tool is not a folder. Placing an outline link under this tool will cause the selected Parent Tool to behave as a folder in the outline.

When completed, Save.

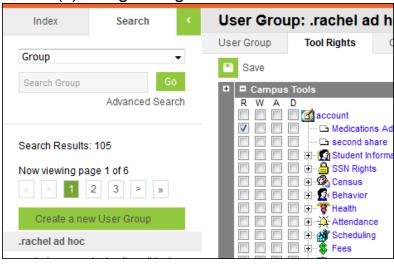


#### Share a Filter in the Index

- Log off, and log back in to refresh the index outline.
- Test the filter/report for yourself.



- Once you've confirmed it's functioning, go to the user group (or create new) to add Read rights to this element in the tool tree.
- Navigate to its Tool Rights tab.
- Click the Read box for the element.
- Ask user(s) to log off/log in to confirm use.



### Questions?

Need more help?

Campus Community is a great resource! Click the Campus Community link in your Campus header, and search the Knowledge Base.





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