RI DataHUB Overview of WEAVE Tools

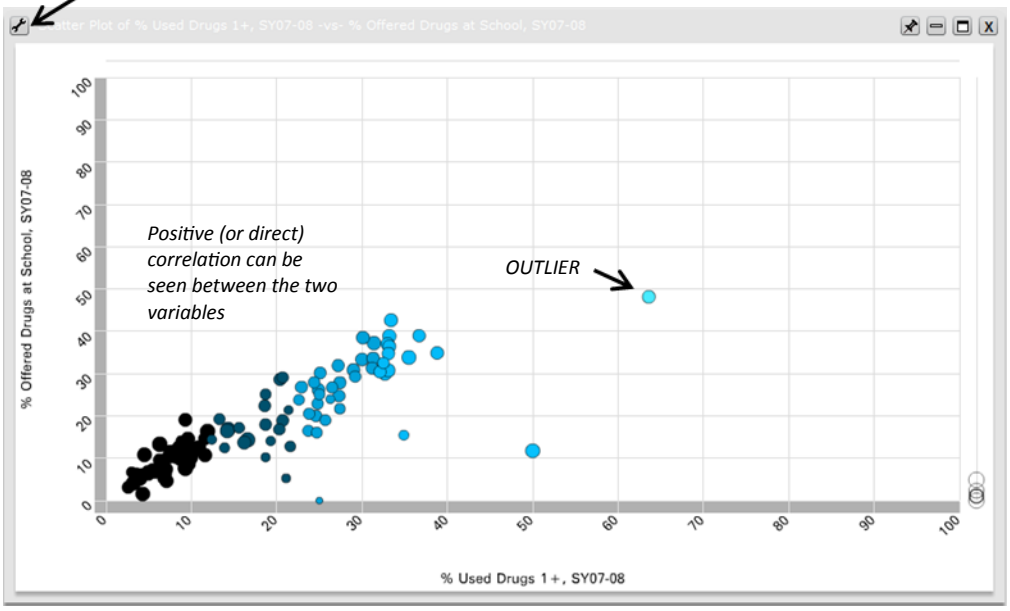
Tool #1:

Scatter Plots

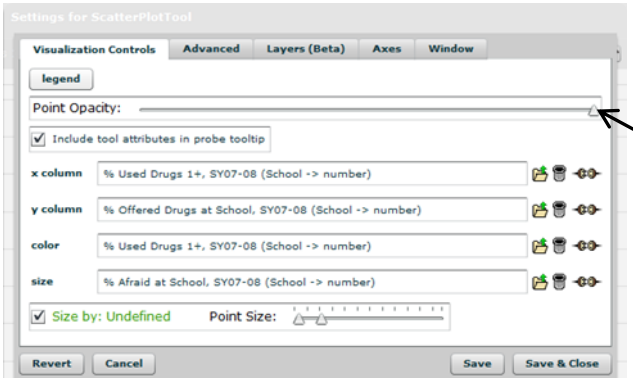
Best Use: Visualizing a large number of data points; determining the relationship between sets of data; looking for outliers

Other tips: Other features within this tool include the ability to visualize multiple variables by changing the color, opacity, and/or size of the points by another indicator

Click on the Wrench icon to change the Settings



X-axis: % of students who Used Drugs 1+ times, SY07-08;
Y-axis: % of students Offered Drugs, SY07-08;
Points sized by % Afraid at School, SY07-08



Slide the triangle to change point opacity

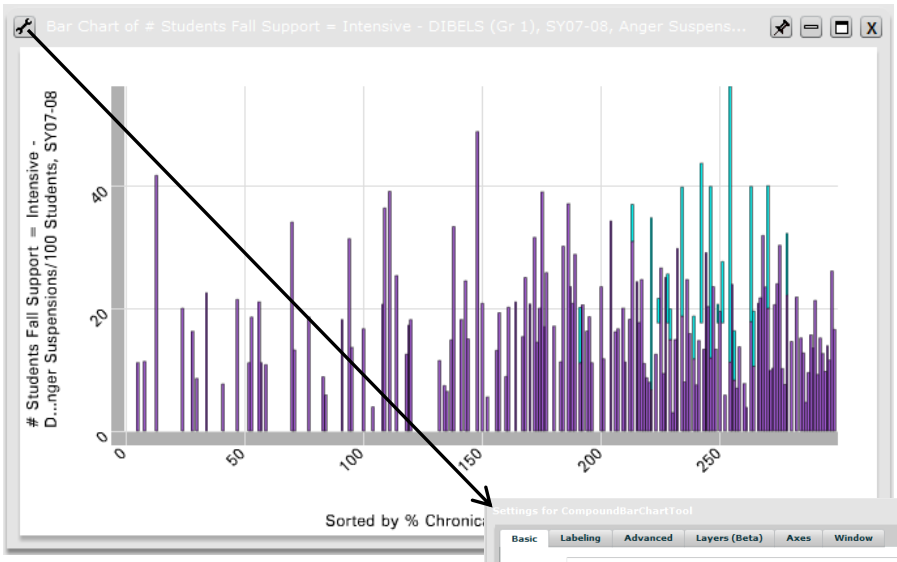
Quick Definitions:

Axis - a line, running horizontally (x-axis) or vertically (y-axis), on which data is measured

Correlation - the extent of the relationship between two variables; it is said to be positive or direct when two variables move in the same direction and negative or inverse when they move in opposite directions.

Outliers - extreme values as compared to the rest of the data

NOTE: A correlation between two variables does not prove that one *causes* the other— a correlation is a hint: a pattern that identifies areas for further investigation.

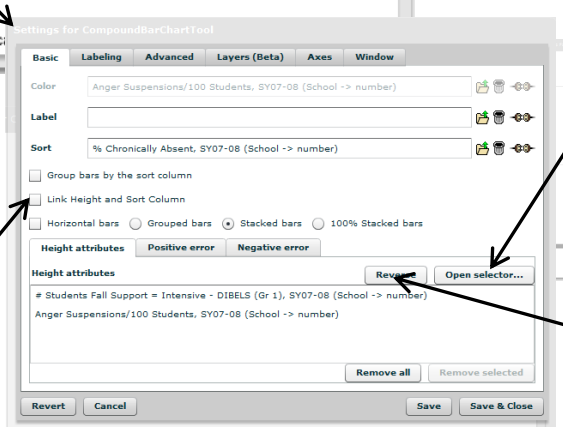


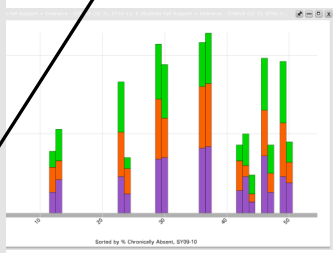
Tool #2:

Bar Chart

Best Use: Comparing groups of data quickly and easily; displaying multiple data sets simultaneously

Other tips: Selecting multiple height attributes in the Settings window changes the bar chart into a stacked bar chart





NOTE: When using the bar chart tool, it's very important to define a Sort parameter that organizes the information along the X-axis.

In the Settings window, select "Link height and Sort Column" to sort by total height

Click on the Reverse button to change the order of the attributes in the histogram; click and drag the indicator name to customize the order

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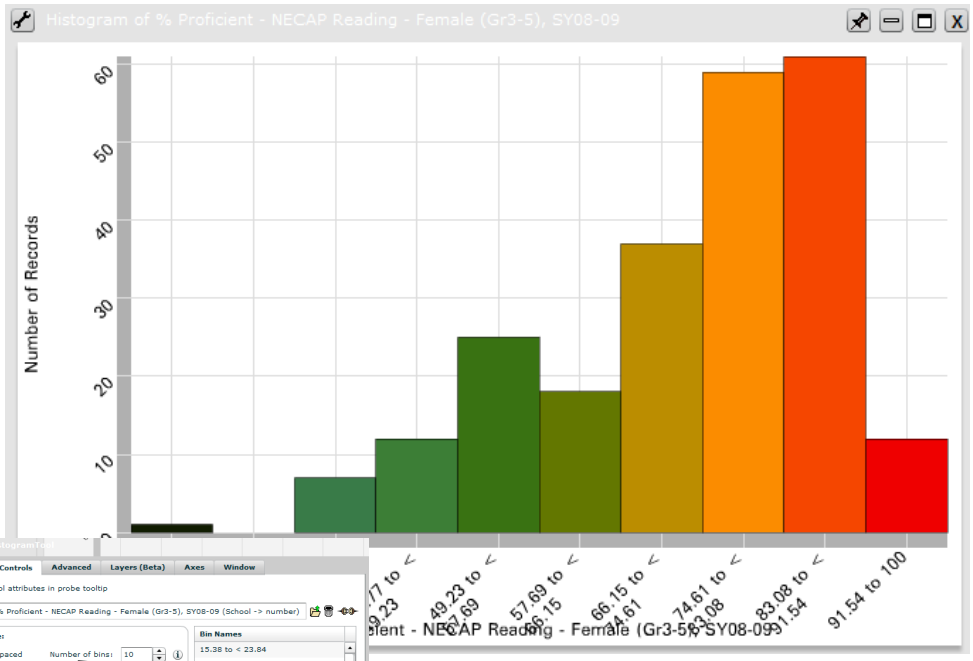
Tool #3:

Colormap Histogram

Best Use: Summarizing large data sets; grouping data

Highlights: Displays distribution of data: where the majority of values fall and how much variation there is

Other tips: Holding the mouse over a specific bar in the chart will display both the number of records and the values that the bar represents



To change the number of bars, or "bins," in the histogram, type in a new number in the Settings window

NOTE: Changing bin size is an easy and effective way to further look for trends in the data.

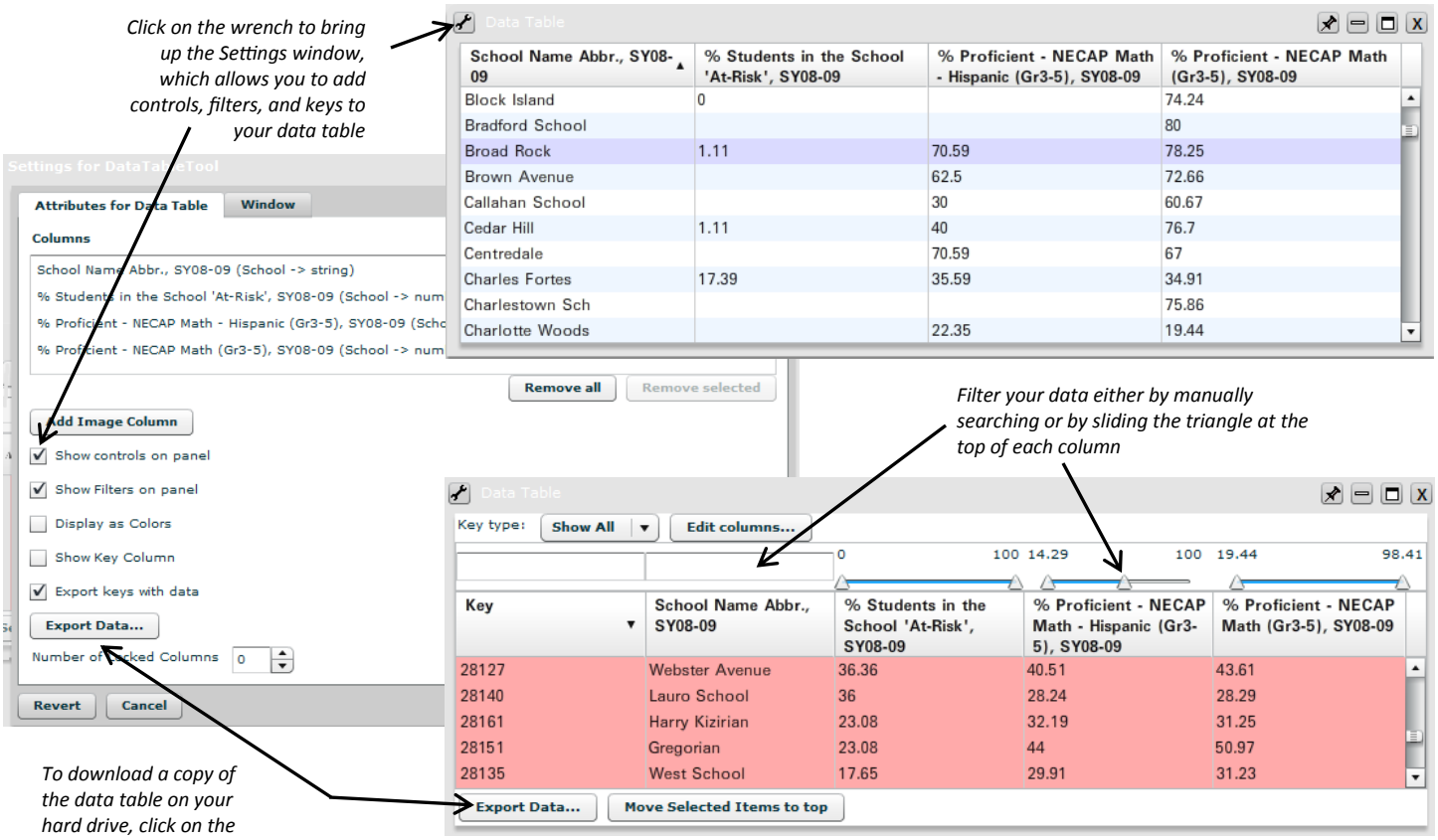
Tool #4

Data Table

Best Use: Displaying multiple fields/values simultaneously

Highlights: This tool allows the user to organize various fields and compare values across multiple variables

Click on the wrench to bring up the Settings window, which allows you to add controls, filters, and keys to your data table

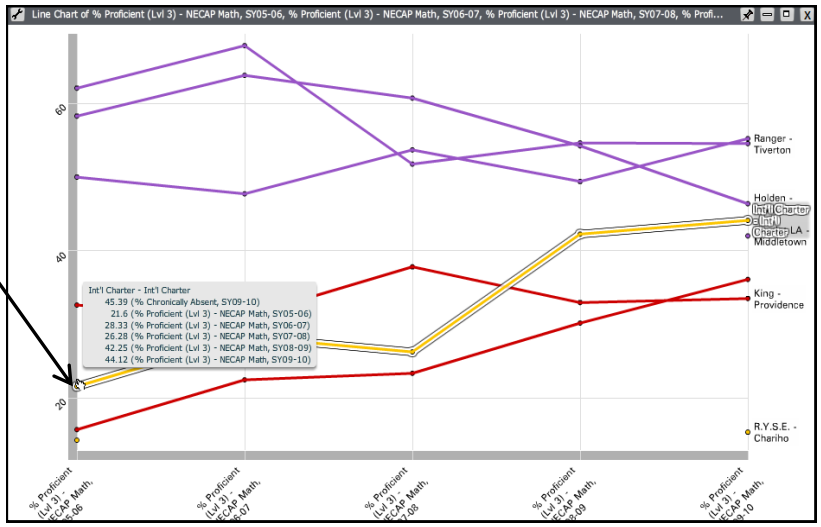


Filter your data either by manually searching or by sliding the triangle at the top of each column

To download a copy of the data table on your hard drive, click on the Export Data button—the data will be exported as an Excel file

NOTE: Supplementing any tool with a Data Table can further organize the visualization.

Hover over a data point to observe a trend



NOTE: Subsets of data can be selected to make clearer and more specific charts. To modify data, select the relevant lines by clicking and highlighting. Then, right click to bring up a list of options, including deleting the probed records from the visualization.

Tool #5

Line Chart

Best Use: Showing changes in indicators over time

Highlights: By displaying multiple data sets simultaneously, allows for comparison of trends: in this case, individual school performance as measured though NECAP scores

Other tips: Change the thickness of the line by selecting the "Appearance" tab in the Settings window

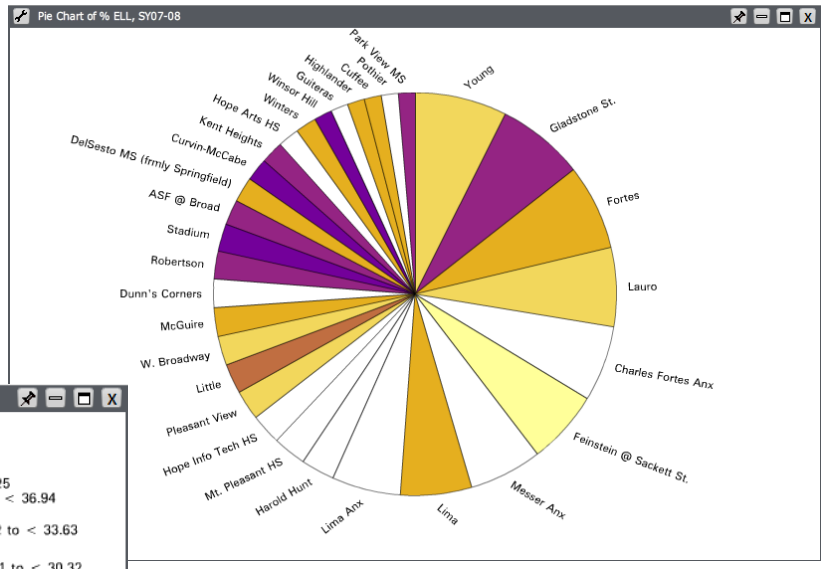
Tool #6

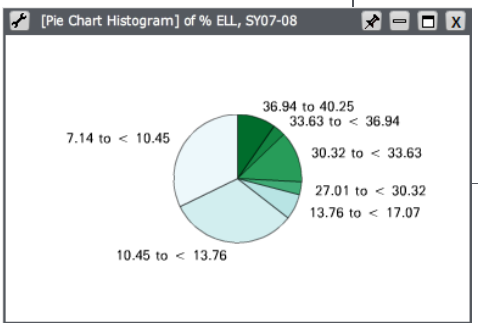
Pie Chart

Best Use: A straightforward and familiar way to compare various parts that sum up to a meaningful whole (100%)

Highlights: Adding a color pie chart histogram can better visualize trends and summarize data

Other tips: As with the line chart, removing some records will improve the overall quality of the graph—also consider changing the angle of the label in the Settings window





NOTE: Data MUST be mutually exclusive in order to be compared in a pie chart. If values overlap, the area of each wedge is NOT an accurate representation of each category.

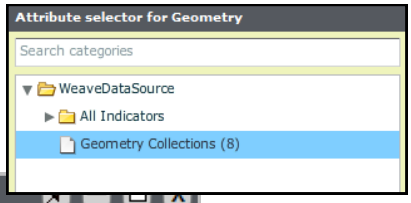
Tool #7

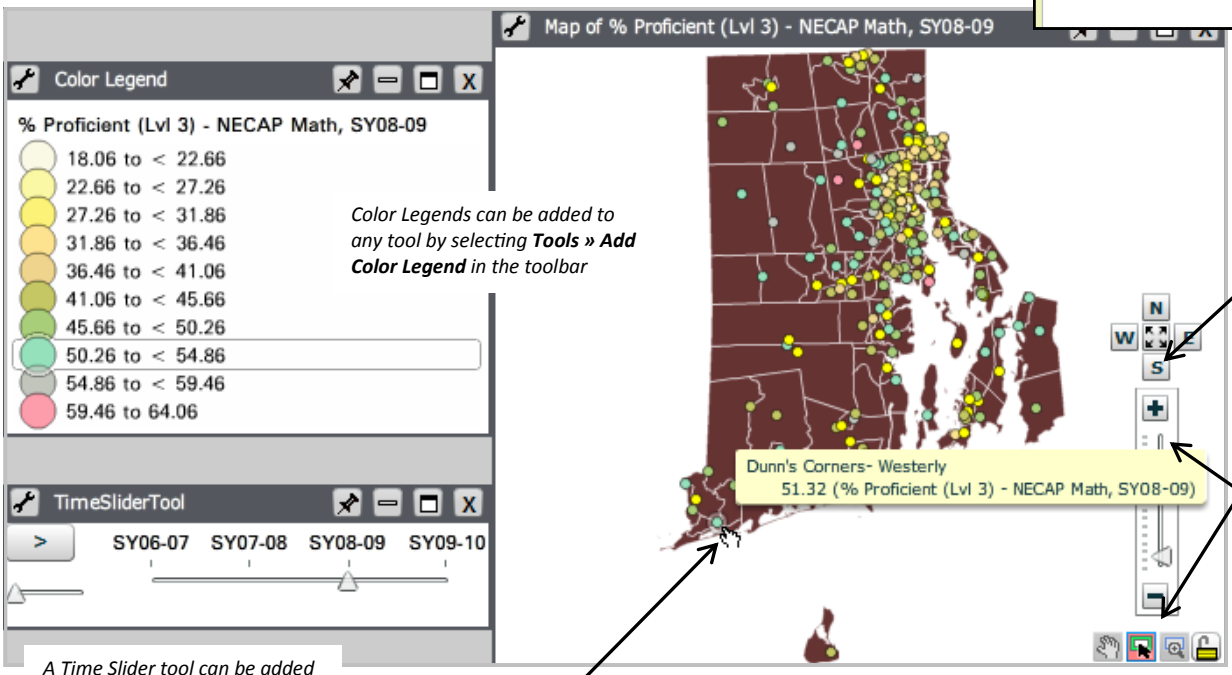
Map

Best Use: Displaying and looking for geographical patterns in data

Highlights: This tool allows the user to map data to specific geographies while still allowing for the selection of individual points

Other tips: To upload a map image, select a Geometry Collection from the online database





*Color Legends can be added to any tool by selecting **Tools » Add Color Legend** in the toolbar*

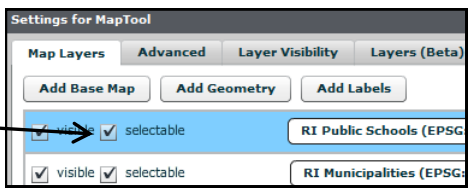
Click this button to enable panning on the map

Clicking on these "+" and "-" buttons or sliding the triangle allows for zooming in and out of the map

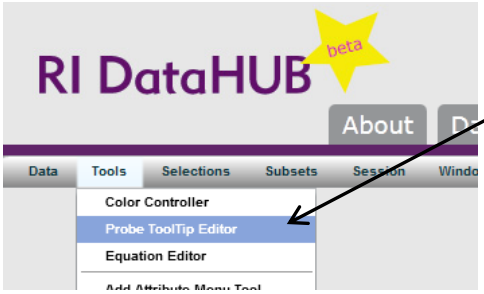
A Time Slider tool can be added to further observe trends

Allow the mouse to hover over specific data points to obtain more information

NOTE: Each Geometry is added to the map as a dynamic, interactive layer. To change a Geometry to a static layer, click the "selectable" option in the Settings window.



Additional Features



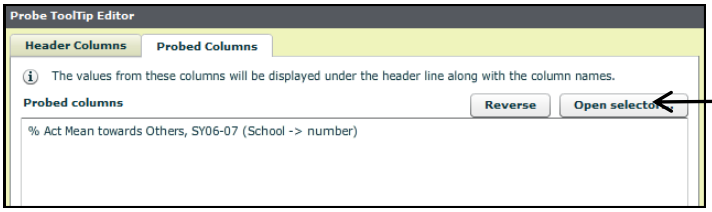
*To access the Probe ToolTip Editor window, click on **Tools » Probe ToolTip Editor** in the toolbar*

Probe ToolTip Editor

Best Use: Labeling individual data points with additional information

Highlights: The Editor window allows users to add as many probe labels to their graphs as necessary

Other tips: Use the Probe to add information that would be useful to include in the final visualization but would otherwise clutter the page if added as a label



*In the Editor window, choose which data to include in the Probe display by clicking on **Open selector…** — selected information will be displayed when users hover over a particular data point*

NOTE: Probe labels may not match perfectly with database names.

Time Slider

Best Use: Showing changes in indicators over time

Highlights: Can be used with other tools, not only scatterplots.

Other tips: By clicking "Play" the graph will automatically begin cycling through the years. Alternatively, the triangle of the time slider can be manually dragged to the next year to change the data that is displayed.

Clicking "Play" causes the graph to cycle through the years on its own

This triangle may be manually slid to years to display these on the graph above.

NOTE: The Time Slider tool can only be used in conjunction with another visualization tool

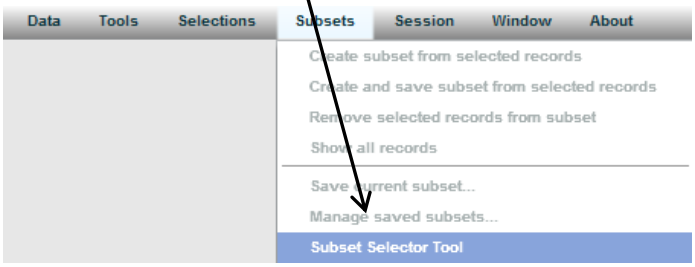
Subset Selector

Best Use: "Bookmarking" groups of records from a larger set of data.

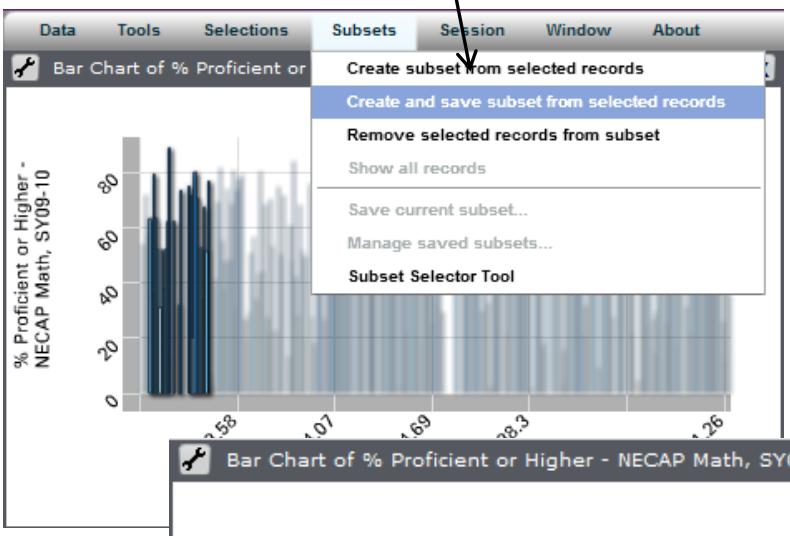
Highlights: Can be used with any Weave tool.

Other tips: A Data Table can help you find specific records to create your subset.

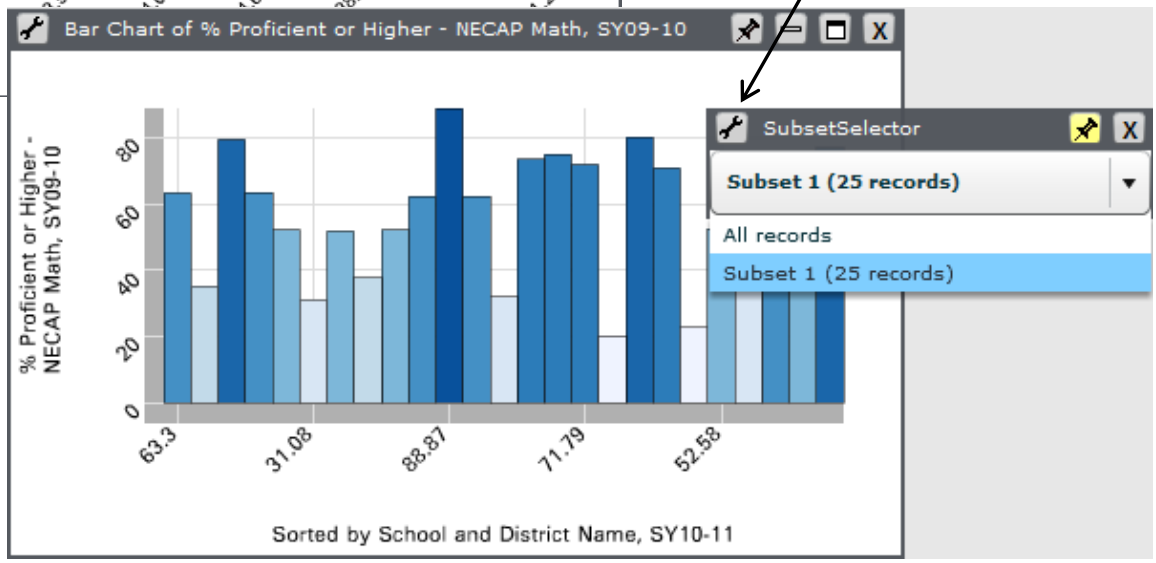
1) Click on **Subsets -> Subset Selector Tool** to add the tool to your visualization.



2) Click and drag to select the records you'd like to view as a subset or select them from your data table. You can select multiple records by holding down ctrl. Then, click on **Subsets -> Create and save subset from selected records** — you will be prompted to name your subset.



3) Click on the Wrench icon to add a display all records option.



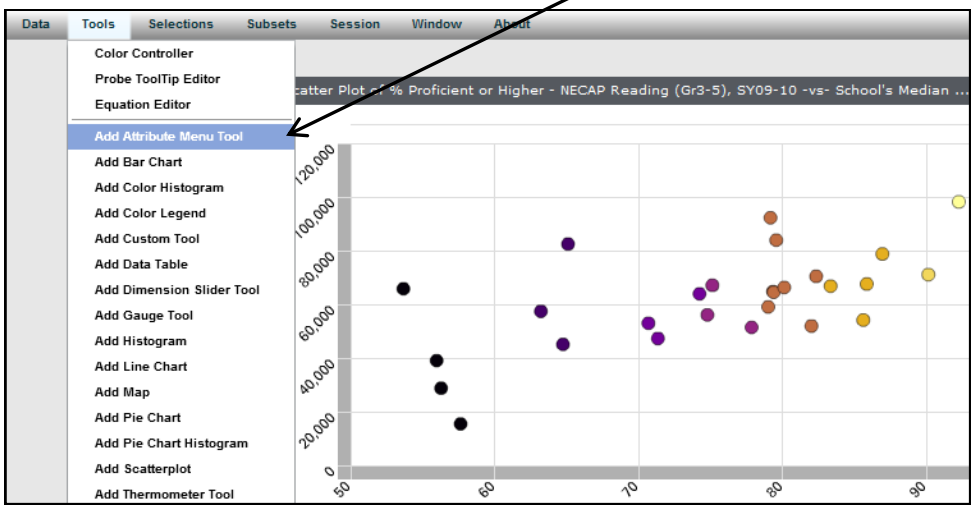
Attribute Selector

Best Use: Easily switch between multiple indicators in the same graph.

Highlights: Can be used with any Weave tool.

Other tips: Consider using the Attribute Selector with the. Scatterplot Tool to look for correlations between one attribute and a set of other attributes.

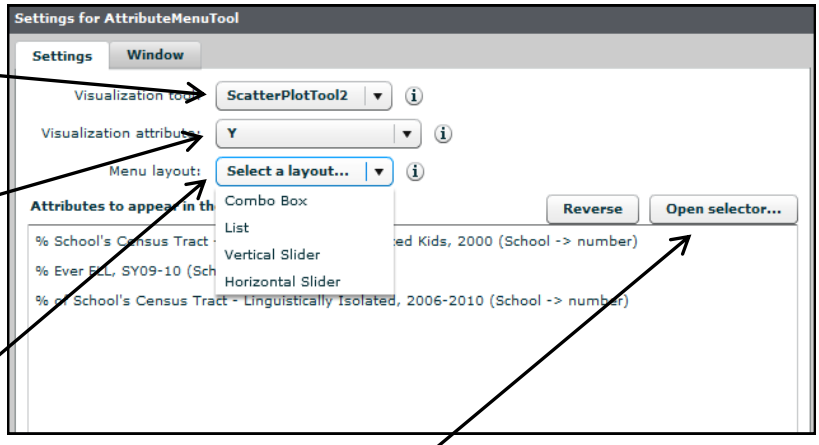
1) Go to Tools -> **Add Attribute Menu Tool** — you will be prompted to design the type of attribute selector you'd like to use.



2) Select the graph you would like the selector to control.

3) Select which attribute you would like to vary.

4) Select the layout for your attribute menu — the "Combo Box" and "Horizontal (Time) Slider" options are used most often.



5) Click **Open selector...** to add indicators — all added indicators will appear in the final selector.