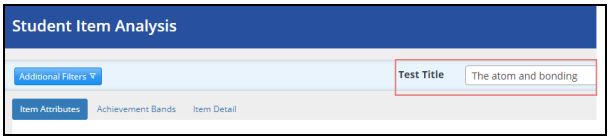
Student Item Analysis

Primary Purpose:	
Displays a comprehensive view of a test with an item-by-item, student-by-student breakdown	
Cut Scores/Colors:	Use Timing:
Defined by the Performance Bands used on the assessment See Cut Scores and Colors on page 1	After each local assessment is administered
Primary Users:	Primary Uses:
Teachers School Administrators	Record test scores in grade book Determine how students did on each question Review the correct and incorrect answers with students Identify areas of weakness and need for remediation
Video	ADMS Reports
Available Online	Student Item Analysis Item Analysis

Guiding Questions:
Which questions/ standards did the students do exceptionally well on? What are areas of strength for my students? Weakness? Which questions did the majority of students get incorrect? What was the common incorrect response for troublesome questions? How did my students perform according to the achievement bands? What were the overall results on the test? How did my class perform compared to the school? Compared to the district? How can I use data from assessments to develop my SLO/SGO goals?

Access the Report

1. Select **Reports** > **Data Analysis- Student Item Analysis** from the main navigation menu.
2. The report will be blank. Select a test from the drop-down menu provided.

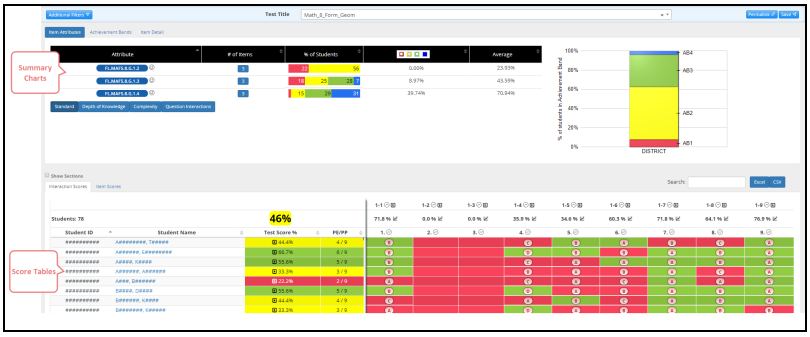


NOTE

Tests appearing as choices must meet all of the following. Results will not appear for students to whom you don't have access.

- Honor any filters set for school, teacher, course, or class
- Have been released
- Have generated and loaded student data

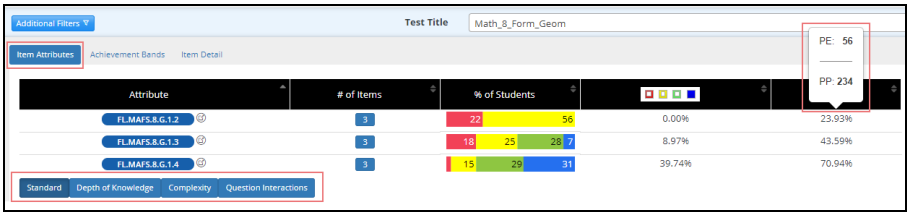
3. The report will appear, comprised of several charts and tables. The top section provides summary charts, initially displaying the Item Attributes tab. The bottom section provides scores tables, initially displaying the Item Scores tab.



Summary Charts - Item Attributes

The Item Attributes tab displays a table listing the standards assessed on the test along with the percentage of students falling into the set achievement cuts as defined by the performance band assigned to that assessment. If no standards were used for the test, you will see the message "No matching records found."

Just below the table, buttons will be available for every item attribute associated with the test. Click on any button to see the student percentage breakdown for that attribute.

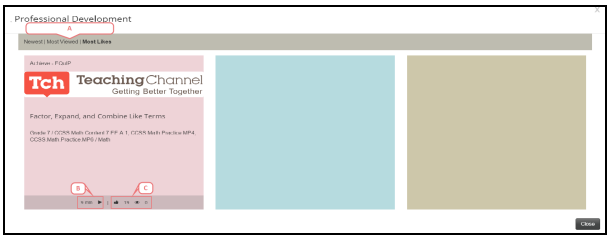


Column	Description
Attribute	The standards or attributes assessed on this test • For standards, hover over the name to see the full standard description • Click on a name to highlight the associated items or interactions in the score tables below
# of Items	The count of items on this test associated with each standard or attribute • Click on a count to filter the results in the score tables below to only those items
% of Students (Bar Graph)	A visual representation of the student population percentage within each achievement band for each standard or attribute • The number located within a bar segment represents the student count • Bars are color-coded based on the test's performance band • Hover over a section of the bar to see the count and percent details • Click on a section of the bar to filter the report by the students represented by that count

Column	Description
% of Students (Swatching)	The header displays color boxes for each achievement band applicable to this test • Boxes are color-coded based on the test's performance band • Click on a color box (called swatching) to include or exclude that achievement band - a full-colored box means the data for that color band is included; a white box means the data for that color band is excluded • Red is excluded by default when you first access the report The rows display the total student population percentage for the selected (full-colored) achievement bands for each standard or attribute.
Average	The average score for each standard, based on the student population currently applied (displayed for Standards only)
PE/PP	Hover over the average to display the total number of points earned for that standard over the total number of points possible.

Some sites may have Professional Development Platforms enabled. For tests that use standards aligned to content from the platform, you will see the following icon.

When you click on the icon, a new window will populate displaying the available Teaching Channel content associated to the specific standard. The window will open to show up to three available Teaching Channel videos per one page.



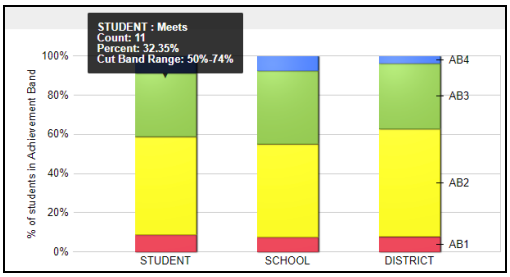
A. You can organize the videos by the Newest video, the video with the Most Views, or the video with the Most Likes.
B. On the bottom of the video, you can view the video's duration and play the video. Once you select play, a new window will populate with the video. When you close out of the video, you will be redirected to the content page with all of the available videos. Any videos you have previously seen will be marked with the word **Watched** in red in the upper right hand corner.
C. On the bottom of the video, you can view the total number of likes the video has received and the total number of views.

To the right of the table, a stacked bar graph displays the overall achievement band percentages. The graph is color-coded based on the test's performance band.
For teachers, this graph will include comparisons across student, school, and district performance. School and district-level users can see these comparisons by setting the school of enrollment and teacher filters.

NOTE

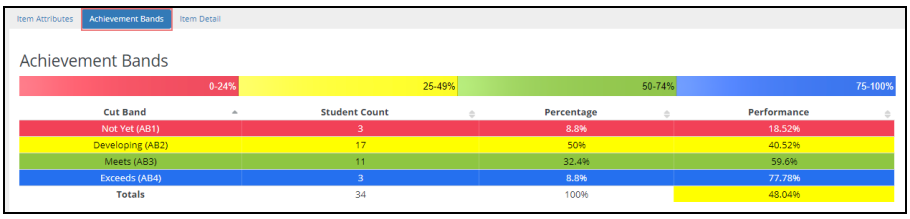
If you use the school of instruction filter, you will not see all 3 bar graphs for comparison. You must use the school of enrollment filter.

Hover over a colored section to see count and percent details. The additional information will include which achievement level the students are in according to the performance band for that assessment.



Summary Charts - Achievement Bands

The Achievement Bands tab displays the percentage of the student population who fell within each achievement level. The cut band color legend, determined by the test's performance band, is displayed above the table.



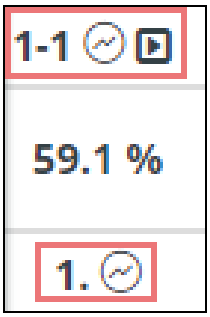
Cut Band	Student Count	Percentage	Performance
Not Yet (AB1)	3	8.8%	18.52%
Developing (AB2)	17	50%	40.52%
Meets (AB3)	11	32.4%	59.6%
Exceeds (AB4)	3	8.8%	77.78%
Totals	34	100%	48.04%

Column	Description
Cut Band	The achievement levels for this test • Achievement Band 1 - The number of students falling below the threshold value (red) • Achievement Band 2 - The number of students meeting the threshold value (yellow) • Achievement Band 3 - The number of students meeting the mastery value (green) • Click on a band name to filter the report by students falling within that band
Student Count	The count of student population falling within each achievement band • Click on a count to filter the report by students represented by that value
Percentage	The percentage of student population falling within each achievement band • Click on a percentage to filter the report by students represented by that value
Performance	The average test score percentage of the student population falling within each achievement band • Click on a percentage to filter the report by students represented by that value

The stacked bar graph to the right of the table displays the same data as it does for the Item Attributes tab - the overall achievement band percentages.

Summary Charts - Item Detail

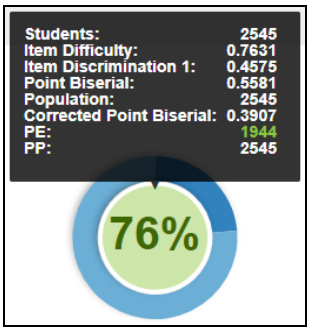
The Item Detail tab displays score or response distributions for individual test items, interactions, and rubrics. To view data, click on the number or corresponding bar chart icon in the scores tables below.



All possible response scores for the selected item, interaction, or rubric will be displayed, showing the percentage of students receiving each score. (For multiple choice interactions, the interaction-level view will show the distribution of answer choices.)

- Hover over a bar to see the count and percentage details.
- Click on a bar to filter the report by students represented by that score.
- Use the drop-down to switch between item-level, interaction-level, or rubric-level view.
- For teachers (or if filters are set), this graph will include comparisons across student, school, and district performance.

To the right of the graph, a chart displays the overall percentage of points earned over points possible for the selected item. When you hover over the inner ring, additional data is provided.



Data Point	Description
Students	Total number of students scored for this item in the currently-selected population (based on any filters applied)

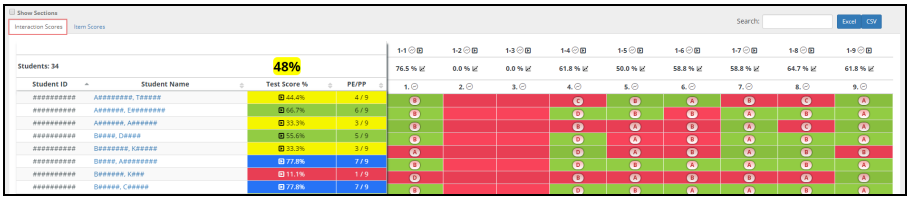
Data Point	Description
P-Value	Value of 0 to 1, this indicates the degree of challenge for items based on the percentage of students who chose the correct answer
Item Discrimination	Value of -1 to 1, this indicates the effectiveness of distractors and pinpoints possible misfits
Point Biserial	Value of -1 to 1, this indicates how well the question can tell the difference between high and low performers
Population	Total number of students scored for this item
PE	Total points earned for this item by the students in the currently-selected population (color-coded based on the test's performance band)
PP	Total points possible for this item by the students in the currently-selected population

NOTE

This report includes several item statistics. For more information on what these represent, see the topic Understand the Statistics on page 1.

Scores Tables - Interaction Scores

Click on the Interaction Scores tab to see results and answers for each interaction on the test for the currently-selected student population. Keep in mind that one item can contain multiple interactions.

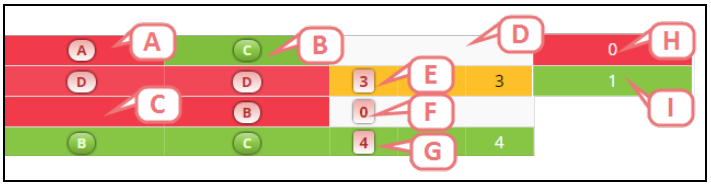


Column	Description
Student ID	The ID number assigned to the student
Student Name	The name of the student • Click on the student name to open their Student Detail report in a new window. • If the student took the test via scan sheet, an icon will appear after the student name. Click this icon to open a view-only copy of the scan sheet in a new window.

Column	Description
Test Score %	The header displays the overall test score for the student population • Hover over the header score to see student population count, overall points earned, overall points possible, and Cronbach's alpha score The cells display the overall test score per student • Hover over any student score to see their points earned / points possible • Click on the play button icon next to a student score to view the complete test and responses for that student; each student response will include an indicator of whether it was correct (green check) or incorrect (red x) and the correct answer for each item will also be provided; click on the PDF button in the preview window to download a copy The header and all cell scores are color-coded based on the test's performance band.
PE/PP	Points earned on the test over the number of points available on the test. • All cell scores are color-coded based on the threshold and mastery value settings for the test. • PP is calculated by adding all of the Points Possible of all of the items that have been scored. If an item is a rubric scored item, it must be human scored before it will be included in the test score. **NOTE** The PE/PP column will remain white until all items have been scored. This will provide a visual queue if any human scorable items have not been scored.
Section %	If the test contained sections, additional columns will display for each section by default. You can hide the section breakdown by deselecting the Show Sections checkbox. The header displays the overall section score for the student population. The cells display the overall section score per student • Hover over any student score to see their points earned / points possible. • All cell scores are color-coded based on the test's performance band.

Column	Description
Interaction Number Columns	The headers display the item number, then overall item score for the student population, then the interaction number(s) • Hover over an item number to view additional details • Click on the play button icon next to an item number to preview the item • Click on an item number, interaction number, or corresponding bar graph icon to populate the Item Details tab in the top section • Click on the plot graph icon next to an overall item score to access its Test Statistics on page 1 report The cells display the interaction responses or scores for each student (student responses to choice interactions will be within circles; scores for text response interactions will be within squares; all other interactions simply display the score) • Hover over any score within a square to see the student response • Click on an interaction response/score to view the item and response for that student; each student response will include an indicator of whether it was correct (green check) or incorrect (red x), and the correct answer will also be provided • If the preview window contains an Edit Response button, student responses can be changed for this test window.

Understanding the Scores- Interaction Scores

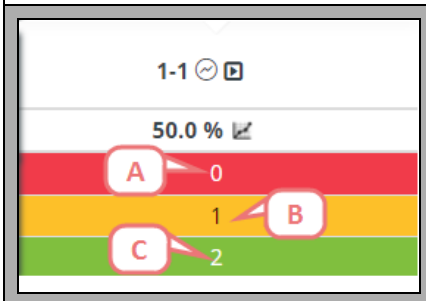


Key	Interaction Type	Response/ Score
A	Multiple Choice	Incorrect response- no credit
B	Multiple Choice	Correct response- full credit
C	Multiple Choice	No response- no credit
D	Rubric Scored Item	Not scored- not factored into score
E	Rubric Scored Item	Scored- partial credit
F	Rubric Scored Item	Scored- no credit
G	Rubric Scored Item	Scored- full credit
H	Interaction other then Multiple Choice	Incorrect response- no credit
I	Interaction other than Multiple Choice	Correct response- full credit

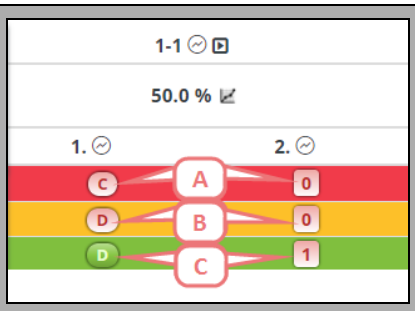
Multi- Part Items

Some items may have more than one interaction. In the Student Item Analysis report, you will be able to see the overall score as well as the score per interaction depending on which tab you are viewing.

Items Tab	Interactions Tab
On the Items tab, you will see the overall score for this question. This score represents the total points earned on all interactions within the item. If you click on the total number of points, you can view all three interactions and the student's responses to each.	On the Interactions tab, you will see the score associated to each individual interaction. If you click on any of the points earned, you can view all three interaction and the student's responses to each.



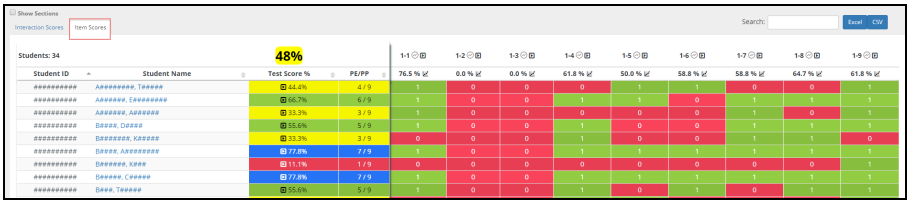
Key	Response	Score
A	Incorrect	No Credit
B	Partially Correct	Partial Credit
C	Correct	Full Credit



Key	Response	Score
A	Incorrect	No credit for either part
B	Partially Cor-rect	Credit for the correct part
C	Correct	Credit for both parts

Scores Tables - Item Scores

In the lower section of the report, the currently-selected student population will be listed along with their total scores and scores for each item on the test.

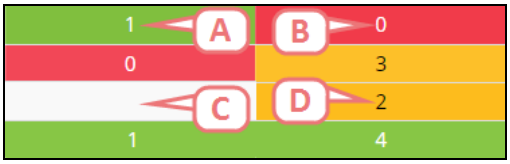


Column	Description
Student ID	The ID number assigned to the student

Column	Description
Student Name	The name of the student • Click on the student name to open their Student Detail report in a new window. • If the student took the test via scan sheet, an icon will appear after the student name. Click this icon to open a view-only copy of the scan sheet in a new window.
Test Score %	The header displays the overall test score for the student population. • Hover over the header score to see student population count, overall points earned, overall points possible, and Cronbach's alpha score. The cells display the overall test score per student. • Hover over any student score to see their points earned / points possible. • Click on the play button icon next to a student score to view the complete test and responses for that student; each student response will include an indicator of whether it was correct (green check) or incorrect (red x) and the correct answer for each item will also be provided; click on the PDF button in the preview window to download a copy. The header and all cell scores are color-coded based on the test's performance band.
PE/PP	Points earned on the test over the number of points available on the test. • All cell scores are color-coded based on the test's performance band. • PP is calculated by adding all of the Points Possible of all of the items that have been scored. If an item is a rubric scored item, it must be human scored before it will be included in the test score. **NOTE** The PE/PP column will remain white until all items have been scored. This will provide a visual queue if any human scorable items have not been scored.
Section %	If the test contained sections, additional columns will display for each section by default. You can hide the section breakdown by deselecting the Show Sections checkbox. The header displays the overall section score for the student population. The cells display the overall section score per student • Hover over any student score to see their points earned / points possible. • All cell scores are color-coded based on the test's performance band.

Column	Description
Item Number Columns	The headers display the item number, then overall item score for the student population • Hover over an item number to view additional details • Click on an item number or corresponding bar graph icon to populate the Item Details tab in the top section • Click on the play button icon next to an item number to preview the item • Click on the plot graph icon next to an overall item score to access its Test Statistics on page 1 report The cells display the item score per student • Click on an item score to view the item and response for that student; each student response will include an indicator of whether it was correct (green check) or incorrect (red x), and the correct answer will also be provided • If the preview window contains an Edit Response button, student responses can be changed for this test window.

Understanding the Scores- Items Scores



Key	Response	Score
A	Correct	Full Credit
B	Incorrect	No Credit
C	Not Scored	Not factored into the score
D	Partially Correct	Partial Credit

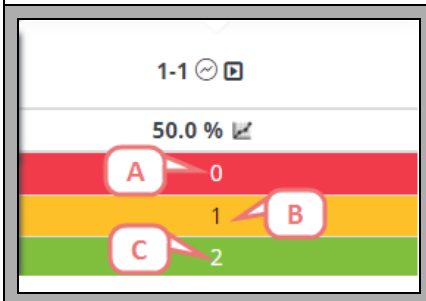
NOTE

If a column is blank and has the label n/a%, this indicates an item which has no student response because a teacher has not yet released this test section to the student OR the student has not completed the assessment and the teacher has opened the test for online scoring.

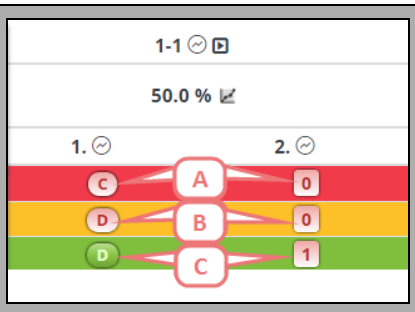
Multi- Part Items

Some items may have more than one interaction. In the Student Item Analysis report, you will be able to see the overall score as well as the score per interaction depending on which tab you are viewing.

Items Tab	Interactions Tab
On the Items tab, you will see the overall score for this question. This score represents the total points earned on all interactions within the item. If you click on the total number of points, you can view all three interactions and the student's responses to each.	On the Interactions tab, you will see the score associated to each individual interaction. If you click on any of the points earned, you can view all three interaction and the student's responses to each.



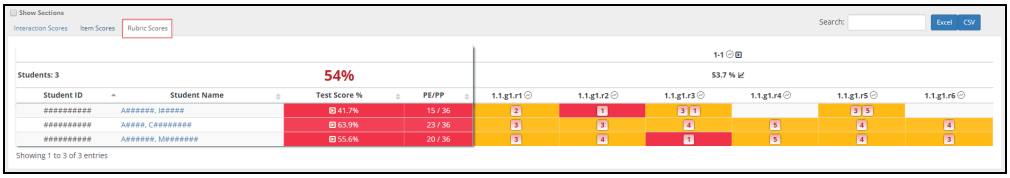
Key	Response	Score
A	Incorrect	No Credit
B	Partially Correct	Partial Credit
C	Correct	Full Credit



Key	Response	Score
A	Incorrect	No credit for either part
B	Partially Correct	Credit for the correct part
C	Correct	Credit for both parts

Scores Tables - Rubric Scores

If the test contained human-scored interactions, click on the Rubric Scores tab to see the breakdown of scores by rubric and/or scorer for the currently-selected student population.

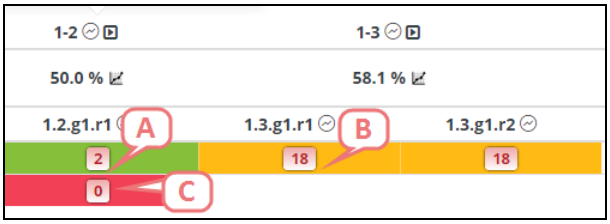


Column	Description
Student ID	The ID number assigned to the student
Student Name	The name of the student • Click on the student name to open their Student Detail report in a new window. • If the student took the test via scan sheet, an icon will appear after the student name. Click this icon to open a view-only copy of the scan sheet in a new window.

Column	Description
Test Score %	The header displays the overall test score for the student population • Hover over the header score to see student population count, overall points earned, overall points possible, and Cronbach's alpha score The cells display the overall test score per student • Hover over any student score to see their points earned / points possible • Click on the play button icon next to a student score to view the complete test and responses for that student; each student response will include an indicator of whether it was correct (green check) or incorrect (red x) and the correct answer for each item will also be provided; click on the PDF button in the preview window to download a copy The header and all cell scores are color-coded based on the test's performance band.
PE/PP	Points earned on the test over the number of points available on the test. • All cell scores are color-coded based on the test's performance band. • PP is calculated by adding all of the Points Possible of all of the items that have been scored. If an item is a rubric scored item, it must be human scored before it will be included in the test score. **NOTE** The PE/PP column will remain white until all items have been scored. This will provide a visual queue if any human scorable items have not been scored.
Section %	If the test contained sections, additional columns will display for each section by default. You can hide the section breakdown by deselecting the Show Sections checkbox. The header displays the overall section score for the student population. The cells display the overall section score per student • Hover over any student score to see their points earned / points possible. • All cell scores are color-coded based on the test's performance band.

Column	Description
Rubric Columns	The headers display the item number, then overall item score for the student population, then the rubric number • Hover over an item number to view additional details • Click on the play button icon next to an item number to preview the item • Click on an item number, rubric number, or corresponding bar graph icon to populate the Item Details tab in the top section • Click on the plot graph icon next to an overall item score to access its Test Statistics on page 1 report The cells display the rubrics associated with each item, denoted by a "g" for the group number and an "r" for the rubric number (multiple columns for an item means multiple rubrics were associated to it; multiple scores within a column means more than one person scored the rubric) • Hover over a rubric number to see the rubric name and description • Hover over a rubric score to see the score description • Click on a rubric score to view the item, full rubric, and response for that student

Understanding the Scores- Rubric Scores



Key	Response	Score
A	Correct	Full points awarded
B	Partially Correct	Partial points awarded
C	Incorrect	No points awarded

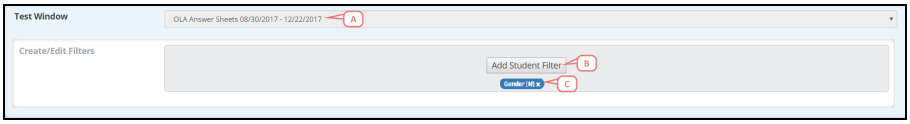
Important Notes Regarding Scores Tables

- Viewing the content of a high stakes test or any of its items requires a user to have HIGH STAKES ADMIN permissions. Only an administrator can assign high stakes admin permissions to a user or group.
- Hover information includes several item statistics. For more information on what these represent, see the topic Understand the Statistics on page 1.

The Filter Options

All filters can be shown/ hidden by clicking the Additional Filters button at the top of the screen.

There are a few different filtering options available with this report.



A. **Test Window** - If the test had more than one test window, you can select one or more particular windows to view. Otherwise, the results displayed will be the most recent test window.
B. **Student Filters** - The gray box is the standard filter tool that adjusts the student population being viewed. Keep in mind that setting filters here for school, teacher, course, or class will limit the choices in the test selection drop-down menu. See Using Filters on page 18 for more details.
C. **In-Report Filters** - Below the student filters box, filters selected while viewing the report are displayed.

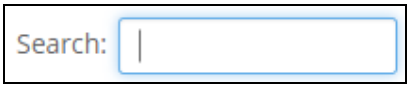
> **NOTE**
> The available student filters will be restricted by the test selected.

Additional Options

You have the following additional options with this report.

Sorting - Click on any column header that includes a light gray double-arrow to sort by that column. A dark gray arrow will display the current sorting selection.

Search - Begin typing in the search box above the scores tables to locate a particular student.



Export - Use the buttons above the scores tables to export the current view of the tables, honoring any filters selected.

- The Excel export will include tabs for both Item Scores and Interaction Scores, with full tables and color-coding.
- The CSV export will be a flat file of the Interactions Scores table.

> **NOTE**
> Opening the CSV file with Excel or other spreadsheet application may result in improper formatting of some cell data. Simply format the cells as text for a proper view of the data.

Permalink - The blue Permalink button located in the upper-right corner of the screen creates a custom link in the browser address bar that can be copied and shared with other users. This will include any student filters currently selected.

Correct a Response/ Score

While viewing the report, you may identify the need to update a student response in order to correct a scoring discrepancy. This is especially useful for interaction types like text entry, which may lack enough correct answer variations to capture all responses the teacher wants to count as correct.

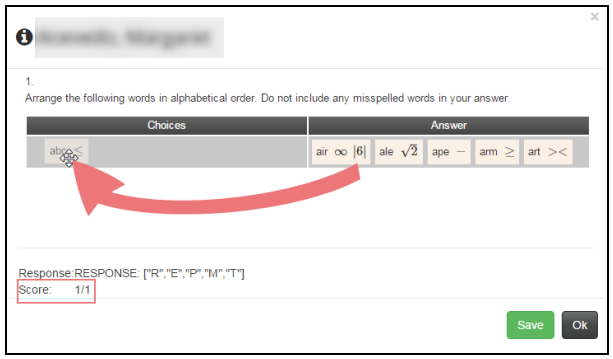
To do this, follow these steps.

1. First, student response editing must be enabled for the test. This is set using the test editor. See "Defining Test Administration Windows" in the topic Build a Test on page 1 for more details.

> **NOTE**
> You must have at least Update permissions to the test in order to change this setting. Teachers who build a private test will have this option enabled by default.

2. In the Item Scores or Interaction Scores table, click the colored cell displaying the score for the response that needs editing.
3. Click **Edit Response** in the upper-right corner of the preview window.

4. Update the student response in the resulting window. The score will be updated as appropriate.

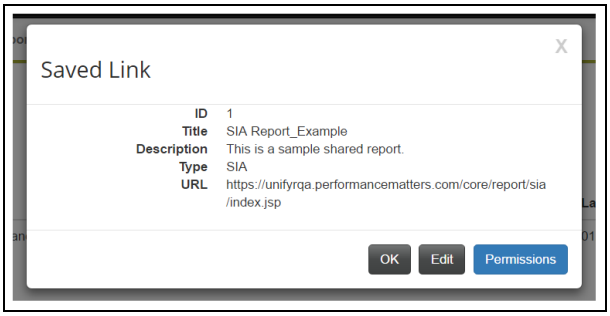


5. Click **Save**. A save success message will flash at the top of the report screen.
6. IMPORTANT: You must refresh your browser window in order to see the score updated in the scores table.

> **NOTE**
> Only machine-scored interaction types can be updated using this process. While responses to rubric-scored items may be editable, the score is not updated. Updates to rubric scores should be done using the scoring assignment for the test. For more details, see the topic Score Student Responses on page 1.

Create a New Shared Report

To create a new available shared report in the Shared Reports Admin tool from Student Item Analysis, navigate to the Student Item Analysis report, select the data accordingly and click **Save** in the upper right hand corner. For more information on Shared Reports, see Shared Reports Admin on page 1.
This will populate the Create new Link window. The title, order, type, and URL will already be filled in based on the report you created.
Click **Save** once you have finished completing the form.
Once you have saved the new report, a new window will pop up:



This will display all of the information you have entered. If this is correct, select **OK**. If you would like to make any changes, select **Edit**. To share the report with users, you will select **Permissions** and add the individual users by name or add users by role.

TIP

To share this report with the entire district, give the district record read access within the permissions modal.

Cut Scores and Colors

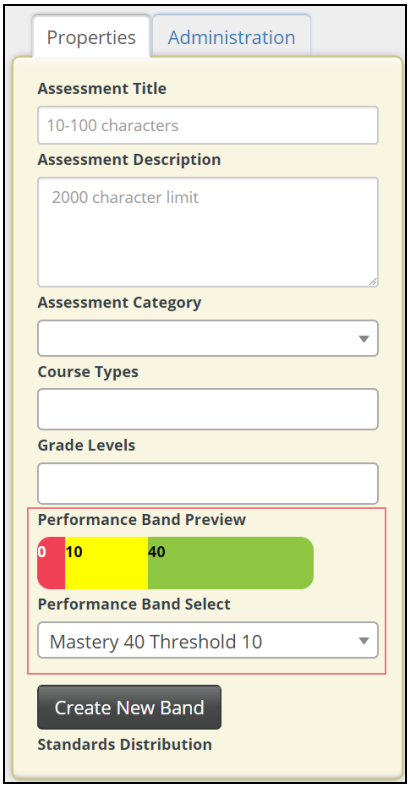
There are different scores colored in Baseball Card, Scoreboard, and Unify. These include:

- National Test Scores (SAT, PSAT, ACT, Dibels, etc.)
- State Test Scores
- Local Benchmark Assessments that are aligned to state-tested standards, designated with BM1, BM2, BM3...BM8, and Weighted Average in reports.

Each state sets its cut scores and each district can set up their color scheme using Performance Bands. See Define Performance Bands on page 1 for more information on how to set up your performance bands.

Performance Bands for a Specific Test

All local benchmark assessments created in the Student Growth can be colored based on the performance band chosen for that assessment.
When a specific test is created, the default performance band for your district will be selected. Each district will determine the cut scores and colors for the default performance band.
Below is an example of the performance band set in a test:



High Stakes Color Table vs. Setting the Performance Band

When discussing local benchmark tests seen in reports, the colors in some reports are defined via the High Stakes Color Table, while others are set by the performance band in Unify as discussed above. Below is a table separating the reports by how they are colored:

High Stakes Color Table	Performance Band
Baseball Card Benchmark Scores	Baseball Card Assessment Scores
Student Detail	Student Detail
Scoreboard Benchmark Scores	Scoreboard Assessment Scores
	Student Item Analysis
	Comparative Results
	MyUnify

Please refer to Unify online help for a list of scores and colors for your state.

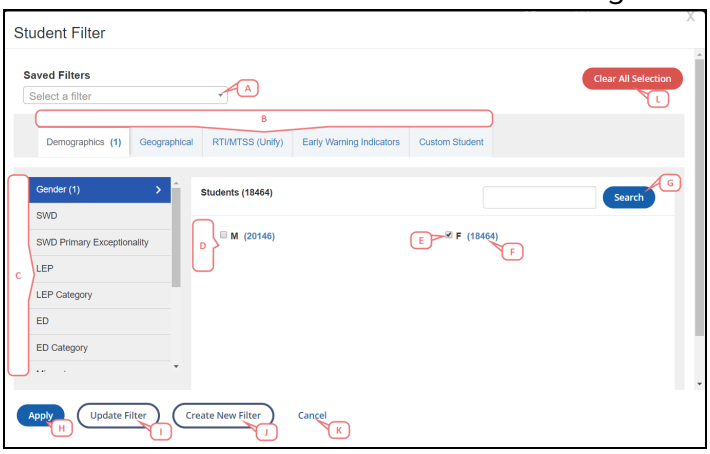
Using Filters

Student filters allow you to adjust the student population included in a particular view of a report. You can apply any number of the standard or district-customized filters available to you. In addition, some reports allow you to use saved filters which are available in the student filter modal. See Use Report Filters on page 1 for more information.

Applying Filters

Use the filters to choose the student population you are interested in viewing.

1. Click in the gray area of the report labeled **Add Student Filter**.
2. The Student Filter modal will open. Navigate through the different categories to set respective filters. You can multi-select filters across categories and attributes.



   A. Use the Saved Filters drop-down menu to access previously created filters.
   B. The available categories available which host the various filter options. The available categories will depend on your permissions.
   C. The different attributes available where you can select specific filters. The list of available attributes will depend on your permissions.
   D. In the white pane, you will see all of the available filters.
   E. Select the checkbox to select that filter.
   F. The blue number will indicate how many available results are associated to that filter.
   G. Use the search feature to easily identify a specific filter.
   H. Click **Apply** to set the filter(s).
   I. If you have update permissions to a saved filter, you will be able to select **Update Filter** to make changes.
   J. Select **Create New Filter** to create a new saved filter. After it has been created, it will be available in the drop-down menu.
   K. Click **Cancel** to close out of the modal.
   L. Click **Clear All Selection** to clear all filters selected.

3. Once you have selected your filters, you will be able to tell which filters have been selected while still within the modal.
   In the example below, there is one Demographic filter set and two Geographical filters set. Within the Demographic tab, the Gender attribute has one filter applied.

> **NOTE**
>
> The filters are respective of each other. In the example above, the two geographical filters set limit the available results for the **Gender> Female** filter to 2 indicated by the blue number.