
Measures of Academic Progress (MAP)

Data Use Guide

MAP Guide Content

Understanding the Data

[What is MAP?](#) – Brief overview of topic

[Understanding RIT Scores](#) – Looking at the scoring score of MAP tests

[Understanding Benchmark/Status Scores](#) – One use for MAP scores

[Understanding Growth Targets](#) – A second use for MAP scores

[Measurement Concepts Specific to MAP](#) – Terms used with MAP data

Accessing the Data

[Finding MAP Reports on Data Dashboard](#) – Locating information on the Dashboard

[Filters](#) – Using filters to locate specific data

[Graphs](#) – Understanding Data Dashboard graphs

[Exporting Data to Excel](#) – How to export Dashboard data to Excel

[Finding Reports in NWEA](#) – How to find various reports on the NWEA website

[Using the NWEA Student Profile](#) – How to use the new student profile reports on the NWEA site

Analyzing the Data

[Purpose](#) – Why look at data?

[Preparing for a Team Meeting](#) – Using MAP data to drive instruction

[Cautions using MAP Data](#) – Not all uses are valid...

Communicating the Data

[Importance of Feedback and Student Expectations](#) – Why should one involve students?

[Setting Goals with Classes](#) – Getting the class involved

[Setting Goals with Students](#) – Involving students in setting goals

[Sharing MAP Data during Parent-Teacher Conferences](#) – Ways of productively sharing the data

[MAP and College and Career Readiness](#) – Next steps

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Understanding the Data

What is MAP?

MAP stands for “Measures of Academic Progress”, an assessment created in the 1990’s by the Northwest Evaluation Association (NWEA). The district requires the Reading and Mathematics subtests to be given to students in grades 3-8. MAP is a computer-based, adaptive test. This means that the difficulty of each questions is based on how well a student answers all previous questions. As the student answers correctly, questions become more difficult. As the student answers incorrectly, the items become easier. Each student answers approximately the same total number of questions. The test works to find the place where a student answers about half the items correctly and half incorrectly. This final score uses a RIT score to provide an estimate of each student’s achievement level.

MAP testing has been used in the Madison Metropolitan School District since 2011-12.

[Back to Guide Content](#)

Understanding RIT Scores

MAP test scores are based on a RIT scale, where RIT stands for “**R**asch **u**nit”. This is named after the person who created this scale. The RIT scale is an equal interval scale, much like centimeters on a meter stick. This means that the space between scores is equal, no matter which grade you are in or which test you are taking. This helps teachers to pinpoint what students have learned and what students are now ready to learn, regardless of what grade level the student is in.

It is helpful to remember that all test scores contain some degree of error. This error is known as the Standard Error of Measure (SEM), and is most often seen as the “+/-” associated with a score (e.g. 217 +/- 3). This represents the fact that if the student took the test again, we would expect her/his score to fall within that range, in this case, between 214 and 220.

[Back to Guide Content](#)

Understanding Benchmark/Status Scores

MAP scores by themselves do not indicate proficiency in the student’s current level of curriculum. Scores that predict proficiency are called “**benchmarks**” or “**cut scores**”. These benchmark scores are used to determine whether students are on track for proficiency on state accountability tests (Forward and the ACT). These are also known as “Status” scores, as they provide one piece of evidence with respect to where a student is at in their understanding.

Categories such as “Advanced”, “Proficient”, “Basic” and “Minimal” are very broad; they should not be used to identify students for additional supports or curricular interventions. The use of percentile scores is better to help inform these types of decisions.

The district is currently using the NWEA 2011 Normative Study for our results. This allows the data to remain consistent over the 5 year life of the MMSD Strategic Framework.

[Back to Guide Content](#)

Understanding Growth Targets

As RIT scores are on an equal interval scale that is not grade specific, it can show growth from one year to the next. After the fall administration of MAP, the MAP system uses information based on millions of student scores over many years to provide an expected growth for the year. This is based on the grade level and student RIT score. This value is called a “growth target”. At the end of the year, the teacher, student and family can see whether a student has met his/her growth target.

Schools set SIP goals for both “proficiency” and “growth.” The “proficiency” goal is really a status or benchmark goal. Goals for “proficiency” refer to the number of students meeting or exceeding the benchmark for their grade level at that time of year. Goals for growth refer to the number of students who meet their growth goals/expectations from Fall to Spring.

[Back to Guide Content](#)

Measurement Concepts Specific to MAP

As you look through NWEA’s MAP reports, you will find some data terms that are not commonly used within the district or with other assessments. These terms include

- Observed Growth SE: this shows the difference in RIT score between the first and the second test, but also incorporates the standard error of measurement from each item.
- Growth Index: The difference between the Observed Growth and the Projected Growth. A positive number is good and may indicate “closing gap” work.
- Conditional Growth Index and Conditional Growth Percentile are methods of comparing student progress. This is not used by MMSD.
- WI: means “Weeks of Instruction”

The MAP test results are often arranged by “quintiles” – groups of 20% increments. On reports you will see designations such as “Low” or “High Average”. These correspond to the following percentile groups and are based on national norms:

Lo: from the 1st to the 20th percentile

LoAvg: from the 21st to the 40th percentile

Avg: from the 41st to the 60th percentile

HiAvg: from the 61st to the 80th percentile

Hi: from the 81st to the 99th percentile

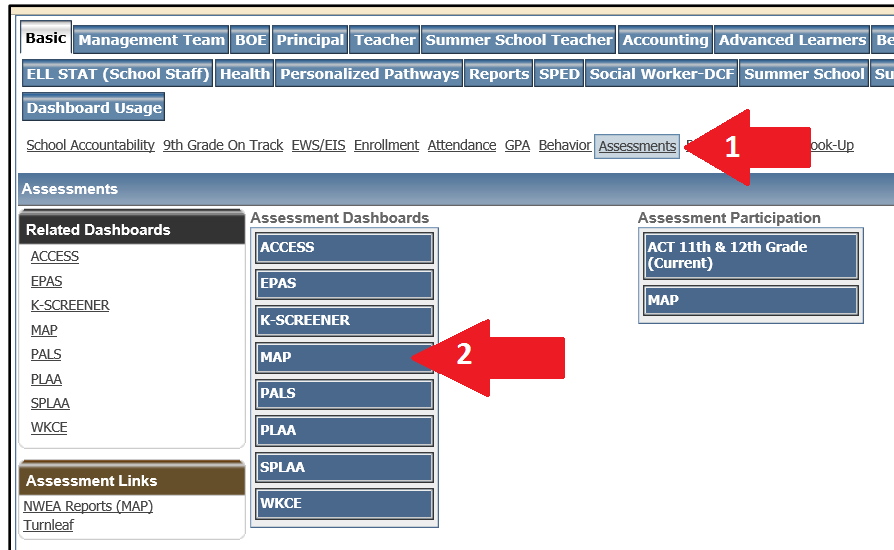
- Goal Performance: this may appear in two forms. ***Bold italic*** scores mean that this is an area of concern as the Goal Strand score is more than 3 RIT points below the overall RIT score. **Bold underlined** scores represent an area of strength. This is when a Goal Strand score is more than 3 RIT points above the student's overall RIT score.

[Back to Guide Content](#)

Accessing the Data

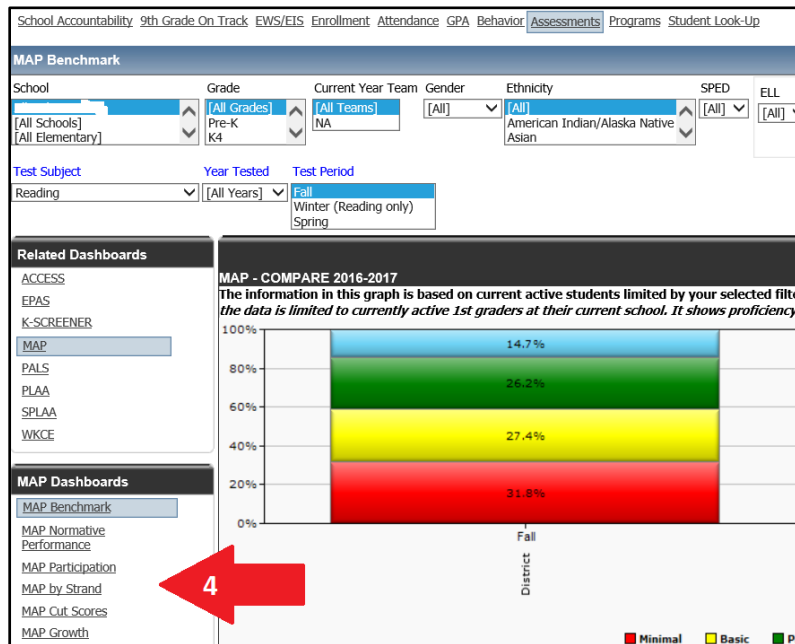
Finding MAP Reports on Data Dashboard

Upon logging in to the MMSD Data Dashboard, select the Assessment menu (1) and then click on the MAP menu in the blue box (2).



This will open the MAP data windows. Begin by using the filters as described below.

The District Cut Scores for MAP determine the proficiency levels represented by various colors. These cut scores, along with other data, can be found in the Related Dashboards menu on the left side of the page (4) once you are in the MAP section of the Dashboard.



[Back to Guide Content](#)

Filters

At the top of each Dashboard is a series of filters. These filters allow you to select a test subject, school year, test period, school, grade, team, program, and a variety of demographic characteristics. This will allow you to sort the data to allow you to answer your questions about student performance on MAP. Make sure that you select a specific test subject to look at **(3)**.

School Accountability 9th Grade On Track EWS/EIS Enrollment Attendance GPA Behavior **Assessments** Programs Student Look-Up

MAP Benchmark

School: Allis Elementary [All Schools] [All Elementary]
Grade: [All Grades] Pre-K K4
Current Year Team: [All Teams] NA
Gender: [All]
Ethnicity: [All] American Indian/Alaska Native Asian
SPED: [All]
ELL: [All]
DPI Lvl: [All] 1 2
ESL Status: [All] Served Not Served
Low Income: [All]
Current Year: [No Filter]

Test Subject (Please select a Test Subject) [All] [Winter (Reading only)] [Spring]

Please select Filter values to display Dashboard.

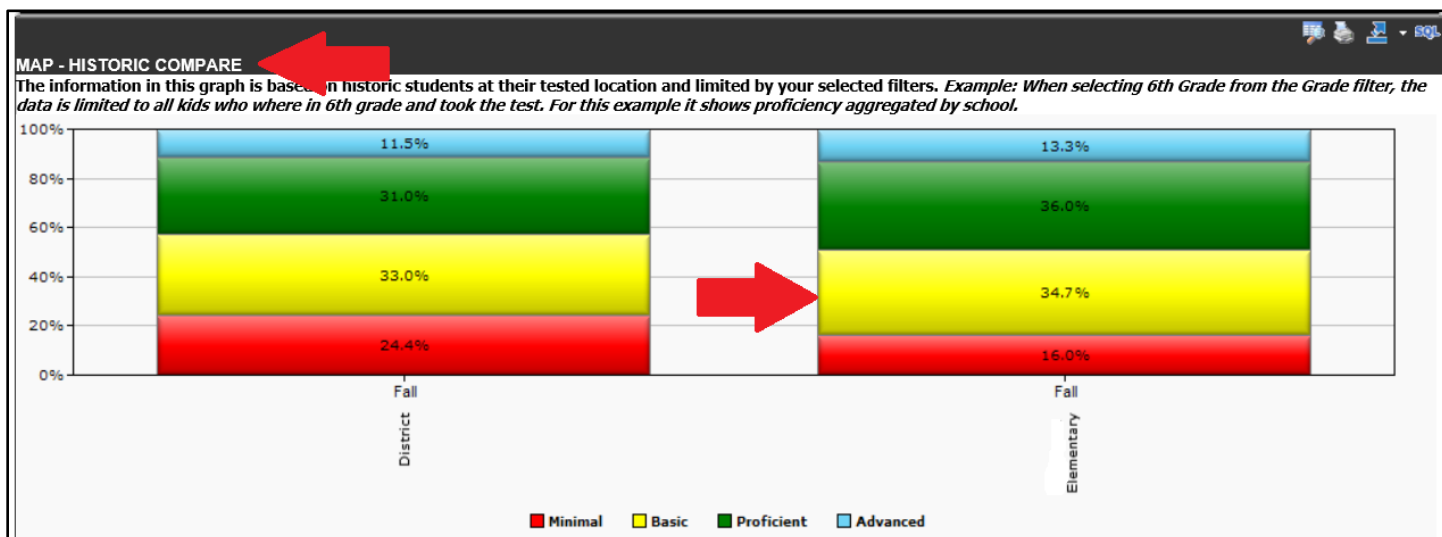
[Back to Guide Content](#)

Graphs

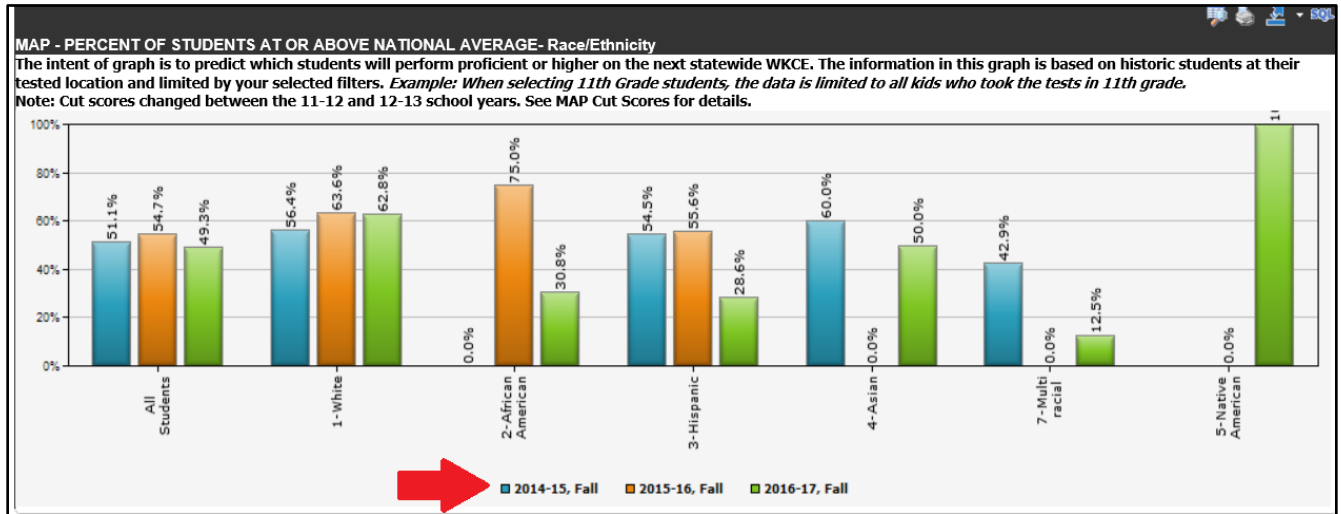
Data is primarily displayed in graph format in MMSD's Data Dashboard. The next section describes how data can be downloaded into a spreadsheet.

Considerations when viewing data in Dashboard graphs:

- Ensure that you understand the data presented in the graph. Read the graph title and description. There are usually many graphs presented on a page, and the one you are looking for may be down the page.
- By clicking on a graph "segment", you will be able to "drill down" to see the students that make up that portion of the graph. This can then be exported if needed.



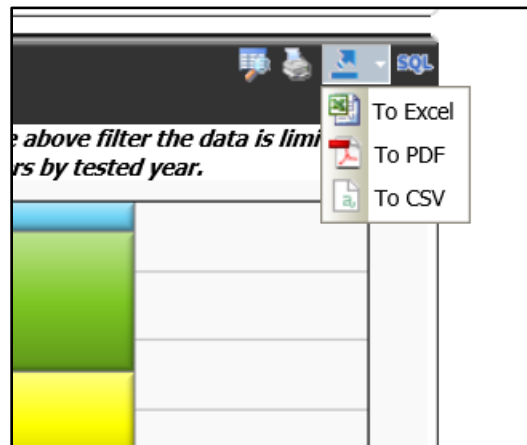
- Note that several years of data may be presented on a page.



[Back to Guide Content](#)

Exporting Data to Excel

In Data Dashboard, there is a quick way to move data to an Excel spreadsheet or to a printable PDF. When you have found a graph or table that you would like to work with, select the "export" icon in the upper right corner of the graph or table. Clicking on the dropdown menu will allow you to select the format that the data will be exported into: Excel spreadsheet, a PDF for printing, or a CSV file. Most often, the Excel choice will be made.



Your data can then be worked with in Excel and/or saved in this format.

[Back to Guide Content](#)

Finding Reports in NWEA

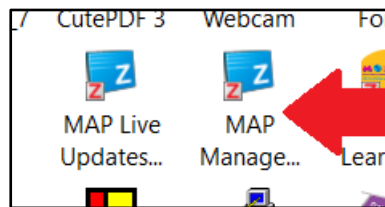
Besides the district's Data Dashboard, there are a variety of reports available on the MAP site. Staff will need to log in to the site in order to gain access to these reports.

Reports update overnight and are available in NWEA accounts the day after testing. If creating reports before the testing window is complete, be aware that scores may not include students who

need to take make-up tests. District averages also are not calculated until the end of testing.

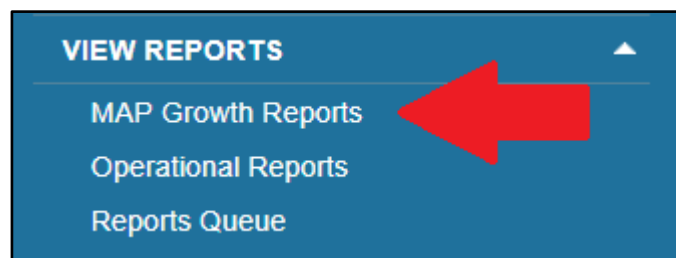
Note: NWEA does not display scores for small groups of fewer than ten students. If there fewer than ten students in a subgroup, their average scores will not display.

To access the NWEA reports, log in using your Zen or NAL window. Click on the icon called "MAP Management Tool"

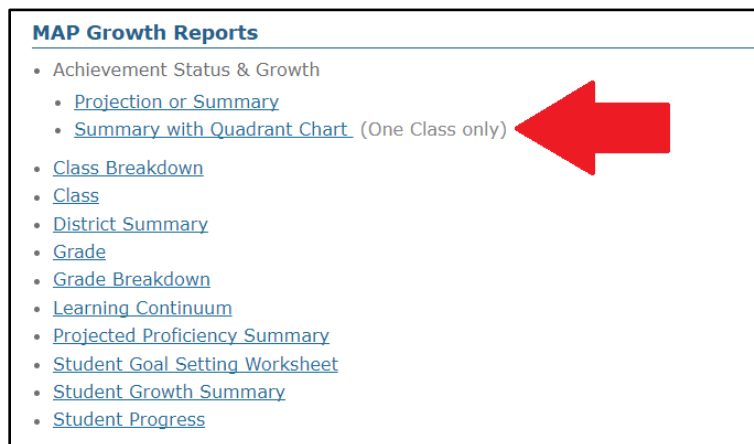


Another option is to use this link: <https://madisonk12-admin.mapnwea.org/admin> with your e-mail address and password. Use the Forgot User Name/Password link if you do not know your password.

Once you have logged on to NWEA, click "View Reports" in the left, blue menu bar. The menu will expand. Click "MAP Growth Reports." The types of reports available to you will vary based on your role. This guide includes reports visible to teachers, including the Class Report, Class Breakdown Reports, and the Quadrant report.

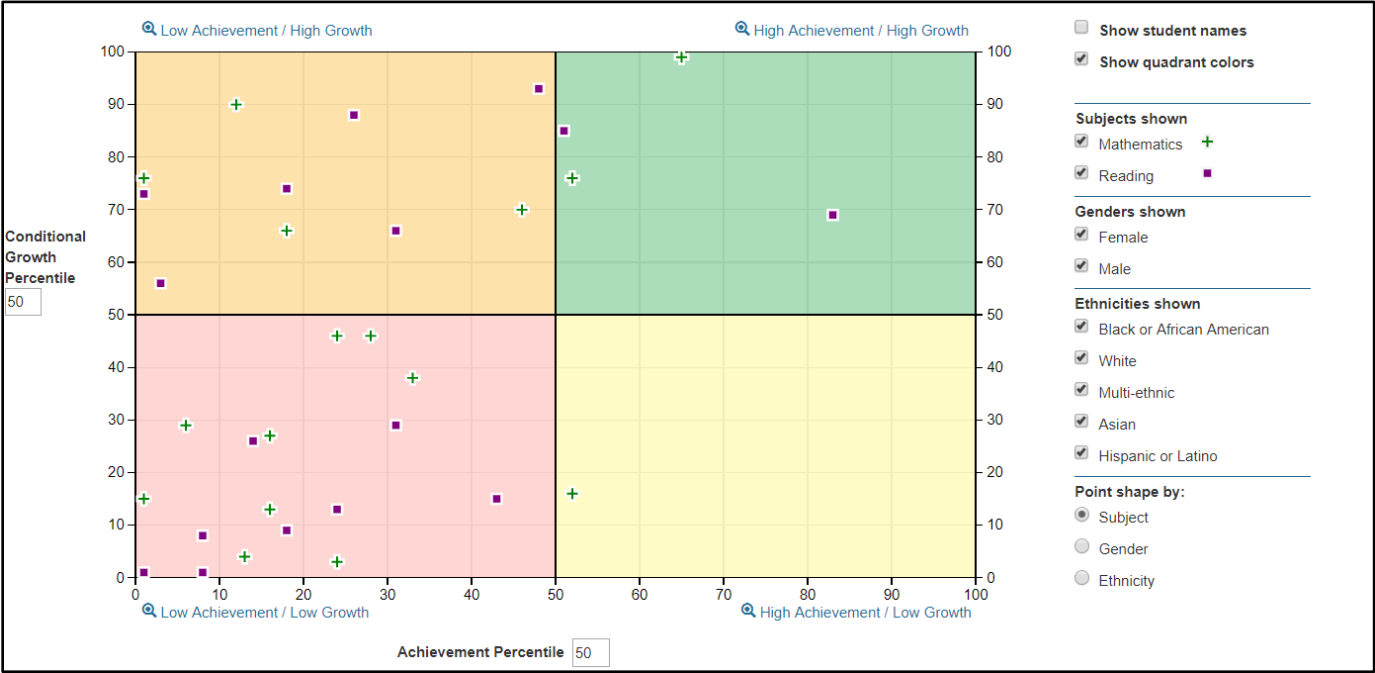


You may select from several reports from the menu.



Summary with Quadrant Chart

This report provides a look, at the classroom level, of student scores. Using the menu at the right, you can view the different characteristics of a classroom (content area, demographics, etc). It may be helpful in setting up small groups that work on specific goal areas together. Limits of the report: data older than two years will not be available.



Class Breakdown

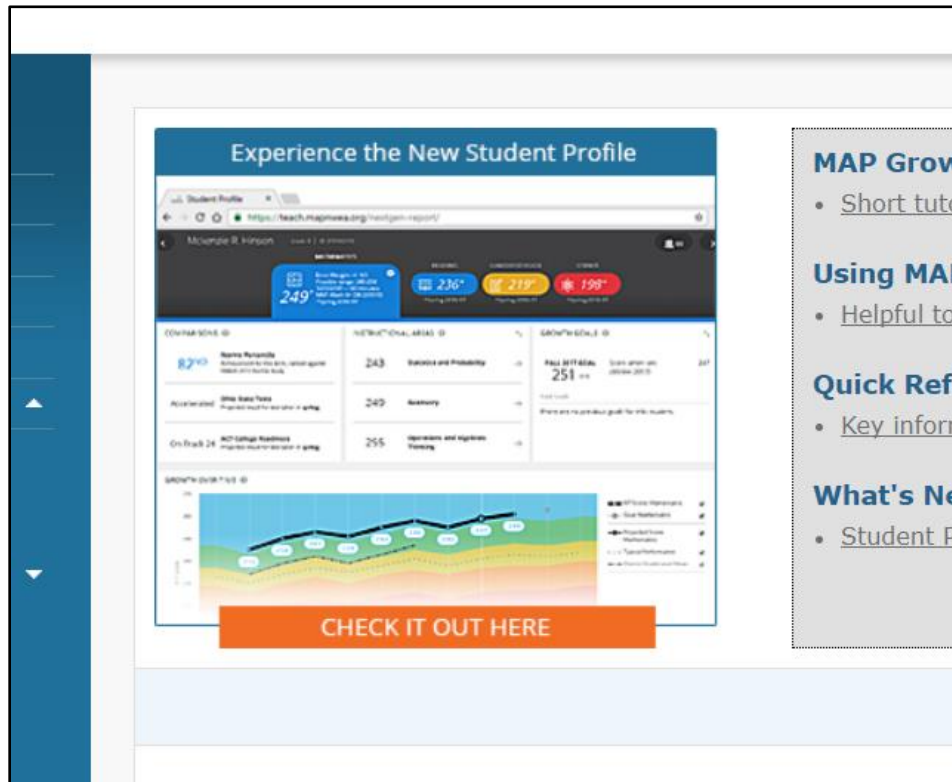
This report provides the teacher with a linear view of where students are in each content area, grouped by RIT level or by Goal. This report allows you to quickly identify areas of relative strength or areas of concern.

School: Weeks of Instruction: 4 (Fall 2017)						
Subject	Overall Score					
	161-170	171-180	181-190	191-200	201-210	211-220
Mathematics	(169)	(178)	(188)	(194) (195) (197) (198)	(201) (201) (201) (203) (205) (210)	(212) (212) (215) (217)
Reading	(168)	(172) (174) (176)	(184) (189)	(192) (192) (195) (196) (198) (198) (200)	(203) (205) (206)	(214) (220)

[Back to Guide Content](#)

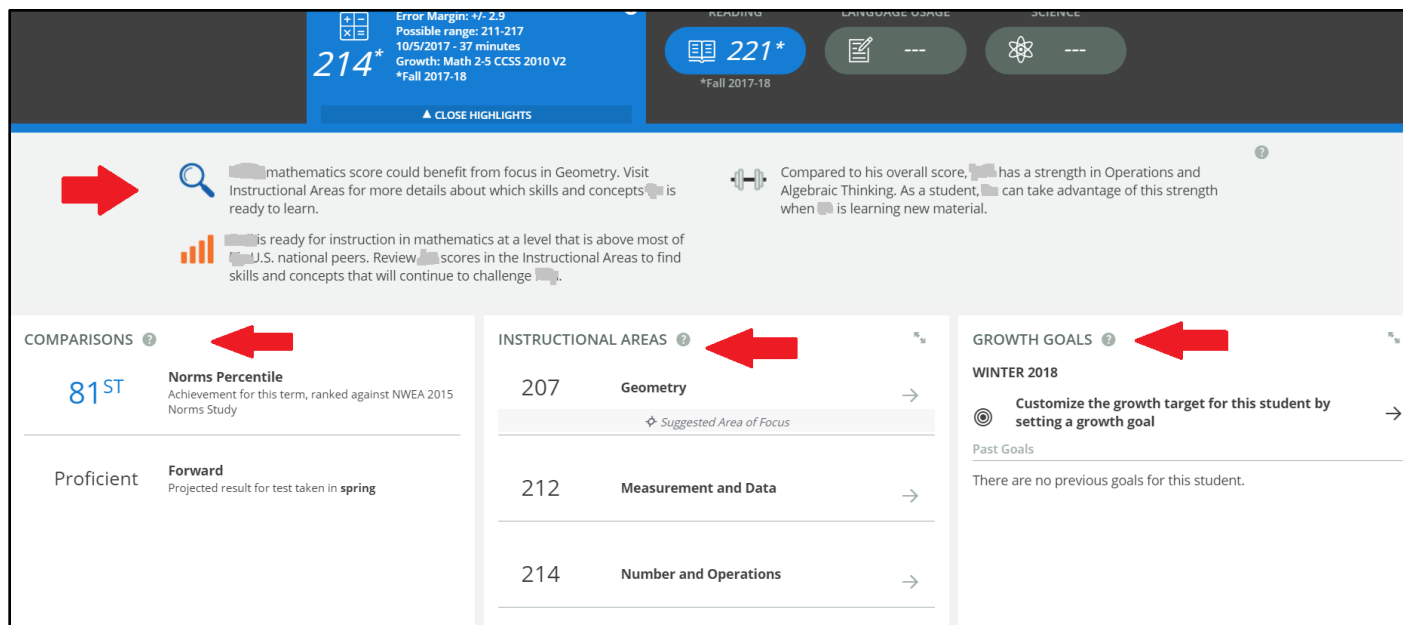
Using the NWEA Student Profile

NWEA has released a new style of report, called the Next Generation Report. This can be found on the MAP home page, in the center.

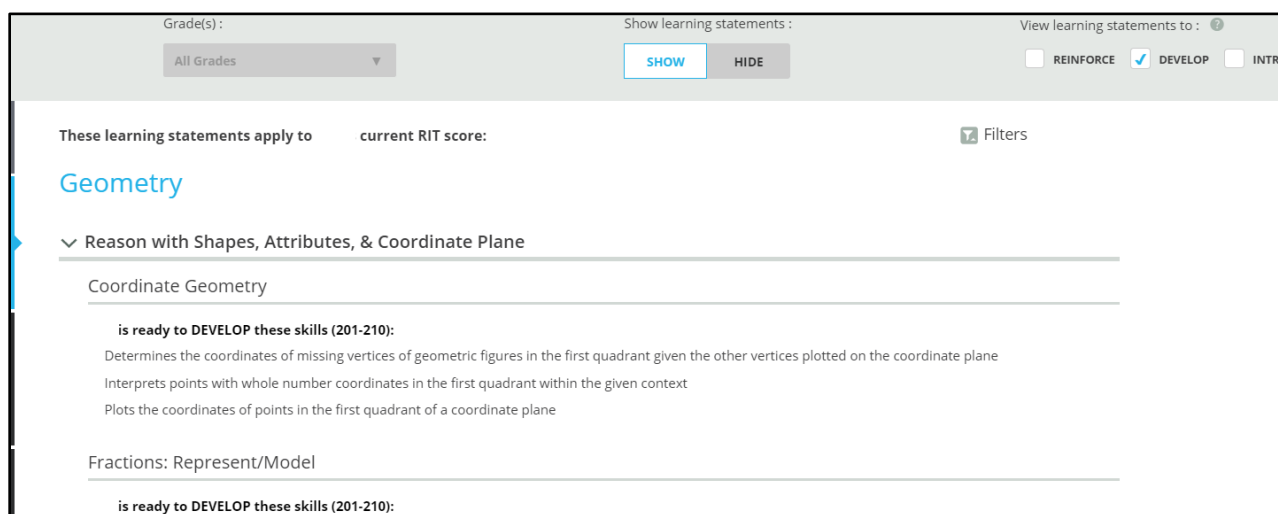


By clicking on the report and using the drop down menus to find a set of students, teachers can look more closely at the data and quickly link to other reports.

Several items appear on this report. Just under the scores are a description of strengths and strategies.



In the left column, national percentile and expected performance on the Forward Exam can be found. In the center column, links to the Learning Continuum and each content goal strand will be found. Clicking each Instructional Area will take you to the Learning Continuum for this student.



In the right column of the initial page, a goal setting link can be found.

[Back to Guide Content](#)

Analyzing the Data

Purpose

MAP results can be analyzed for different purposes. The district and the school, typically the SBLT, can analyze MAP results on an annual basis for summative purposes. Here, we would ask, “how are we doing as a school district or an individual school on hitting our benchmarks? How have we done over time? Do we need to consider making systems level adjustments within our core instruction?”

MAP results can also be used as an interim assessment to assess growth over a shorter period of time (e.g., fall to fall, spring to spring, fall to spring). Teacher teams will likely analyze the results from this perspective. They may use Fall MAP results in combination with other screening results to understand what instructional levels their students are performing at within the domains of Reading and Math. A teacher’s use of day to day formative assessments, interim common assessments, and/or other progress monitoring measures will help teachers to know if their students are on-track for meeting year-end growth goals.

The Data Analysis Protocol (located in the [SBLT Toolkit](#) and [Teacher Team Toolkit](#)) provides an excellent structure to analyze any data, including MAP. Here, you identify your purpose for analysis. Questions on the Data Analysis Protocol will help guide your problem solving, action planning, and follow-up steps.

Consider the supplemental questions below as needed as you review your data. These questions, which are specific to the type of data discussed in this Data Use Guide, are designed to be paired with the questions in the Data Analysis Protocol to help you dig deeper into your data.

[Back to Guide Content](#)

Preparing for a Team Meeting

The process outlined below is a sample of how a grade level team may use MAP data to improve instruction for all students.

Bring printed copies of your Class Breakdown by Overall RIT and Class Breakdown by Goal reports. And/or bring your laptop to access the reports in a live format. Know your NWEA login information. If the team wishes to begin with grade level data, start by accessing the Data Dashboard.

Looking at Class Breakdown by Overall RIT

Review the Data

Review key terms in the Understanding the Data section as needed. Notice: Student RIT scores are grouped into score bands. Depending on the students in your class, your report may start or end with different bands than those of your colleagues.

Find the benchmarks for your grade level and time of year on the MAP Cut Scores Dashboard (grades 2-8). These are also within the Benchmark Document at the bottom of these sites: [Elementary Information](#) or [Middle School Information](#).

Briefly find your way around the data: Which student has the highest score? Which student has the lowest score? Which student has the median score? How do those scores compare to the benchmarks?

Analyze the Data

How many RIT bands are represented in your class? The more bands shown (and the higher the standard deviation), the greater the academic diversity of the group.

Where are students clustered? Are there outliers or clusters of students who seem to be at the upper end or the lower end of the score distribution? Which groups of students might need additional support?

Discuss Root Causes

What within the school's curriculum, instruction, and/or environment may be contributing to your current results?

Consider Actions

Consider creating flexible small groups based on student strengths and needs.

Would it be helpful to create cross-class groupings to address student needs and strengths more specifically? What other data (Beginning of Year assessments, formative assessments, teacher- or team- created assessments, other student work) complements this information? How can teachers in all subject areas reinforce disciplinary literacy and mathematical reasoning?

Looking at Class Breakdown by Goal

Review the Data

Review key terms in the Understanding the Data section as needed. Notice: Numbers in parentheses for each student indicate that student's overall RIT score for the subject area (Reading or Math). Again, depending on the students in your class, your report may start or end with different bands than those of your colleagues.

Briefly find your way around the data: Which student has the highest score? Which student has the lowest score? Which student has the median score?

Analyze the Data

Compare students' RIT scores for each goal area to their overall RIT score (in parentheses) for that subject. For example, a student with an overall RIT score of 205 in Math and a 190 in Measurement and Data may need additional support for that goal area.

Which areas are relative strengths for your class? Which are areas of need?

Discuss Root Causes

What within the school's curriculum, instruction, and/or environment may be contributing to your current results? How do students' needs and strengths align with your curricular expectations?

Consider Actions

For which goal area will whole-class instruction be most effective? (Hint: Where are the students least spread out over multiple RIT ranges, indicating less variability?)

For which goal area will use of flexible groups be most helpful? (Hint: Where are students most spread out across RIT ranges?)

Use the Learning Continuum to align curriculum with student strengths and needs.

[Back to Guide Content](#)

Cautions Using MAP Data

While it is useful in many ways, MAP data has its limitations. Listed here are a few things to consider when you use MAP data.

Standard Error of Measurement

Whenever a score is reported, it includes a measure of error. This error is represented as a range around the RIT scores. It is a part of all RIT scores, regardless if it is listed. Where is this a concern?

Let's say that a student has a predicted growth of 4 RIT between fall and winter administrations. If the winter report indicates that they have an observed growth of 3 RIT, did the student reach their goal? The Standard Error of Measurement (SEM) must be a part of the answer. If the SEM is 3.2, what does that indicate? It means that this particular student could have grown by as much as 6+RIT, or may have essentially remained stationary with a -0.2 RIT growth. When making decisions regarding where to place resources (e.g. interventions), please keep this in mind.

[Back to Guide Content](#)

Communicating the Data

The Importance of Feedback and Student Expectations

When used thoughtfully and in combination with other data, MAP reports can be a useful source of feedback to students about their progress. In *Visible Learning for Teachers*, John Hattie (2011) reports that of all the many strategies he analyzed, the most effective was asking students to set expectations for their learning and then encouraging them to surpass those expectations.

[Back to Guide Content](#)

Setting Goals with Classes

The following are some ideas that you can use with the entire class. The data can be found in either the Data Dashboard or on the NWEA site.

- Consider sharing the class median or average for a selected goal area.
- Use the Learning Continuum to unpack selected standards related to that goal area, and share it with the class.
- Share learning targets related to the standards within that goal area.
- Make the connection explicit when designing and implementing instruction for that goal area.
- Invite students to brainstorm ways the class can improve in the selected goal area.

[Back to Guide Content](#)

Setting Goals with Students

Use the Student Goal Setting Worksheet report. This is shown below, and can be found on the MAP reports page of NWEA's site.

- Invite students to reflect on their performance, including areas of strength and possible areas of concern.
- Help students to set a goal that is related to areas for improvement.

On this sheet, the green areas represent Goal Strands of relative strength; 3 or more RIT points above the student overall RIT score for the content area. The yellow areas represent Goal Strands that need improvement. This is an area that is 3 or more RIT points below the student's overall RIT score for the content area.

Term Rostered: Fall 2017-2018

Mathematics (Growth: Math 2-5 CCSS 2010 V2)

	FA17	WI18	SP18
Overall RIT Score	195		
Goal Performance			
Operations and Algebraic Thinking	186-198		
Number and Operations	190-202		
Measurement and Data	184-196		
Geometry	195-207		

Projected RIT 205
My Goal _____
RIT Growth *

Student Action Plan: _____

Reading (Growth: Reading 2-5 CCSS 2010 V3)

	FA17	WI18	SP18
Overall RIT Score	189		
Goal Performance			
Literary Text: Key Ideas and Details	186-202		
Literary Text: Language, Craft, Structure	183-197		
Informational Text: Language, Craft, Structure	177-191		
Vocabulary: Acquisition and Use	183-197		
Informational Text: Key Ideas and Details	179-194		

Projected RIT 197
My Goal _____
RIT Growth *

Lexile® Range 303-453L
Student Action Plan: _____

Student Signature: _____ **Instructor Signature:** _____
Parent Signature: _____ **Date:** _____
Explanatory Notes
RIT ranges may indicate an area of relative strength or area of possible concern determined by comparing the student's Goal Performance score with the student's Overall RIT Score for the

[Back to Guide Content](#)

Sharing MAP Data in Parent-Teacher Conferences

The district prints and distributes to schools a copy of each student's Student Progress Report. This shows all of a student's scores since they began taking the test, with bar graphs comparing the district and national norms to the student's scores.

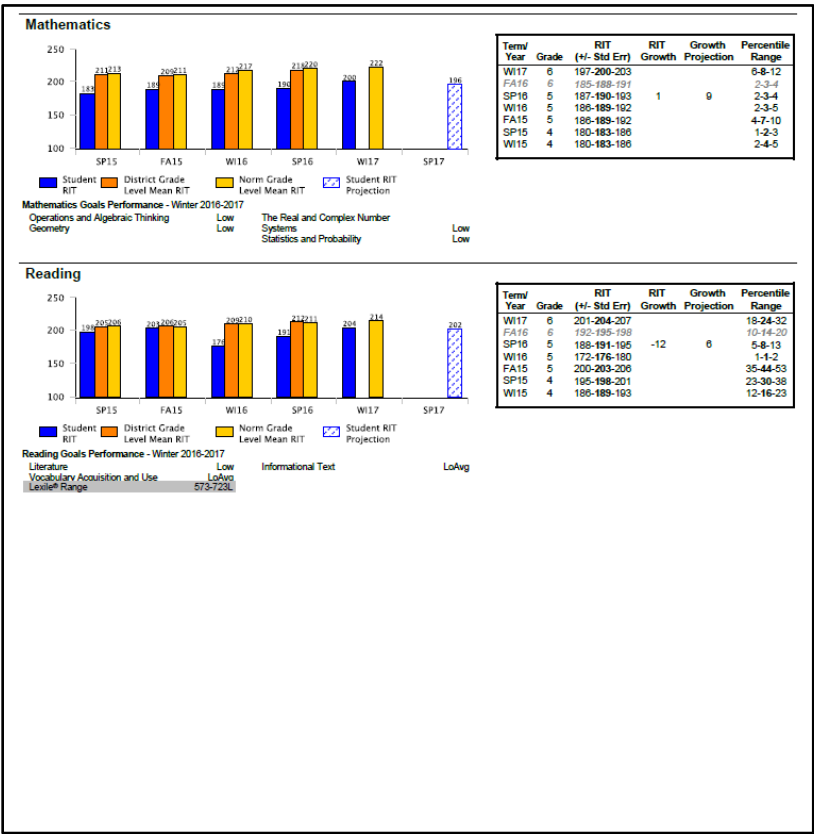
Spend less than 5 minutes talking about MAP scores in a 20-30 minute conference. Be prepared to discuss student reports. Understand report terms like RIT score, mean, median, and projected growth.

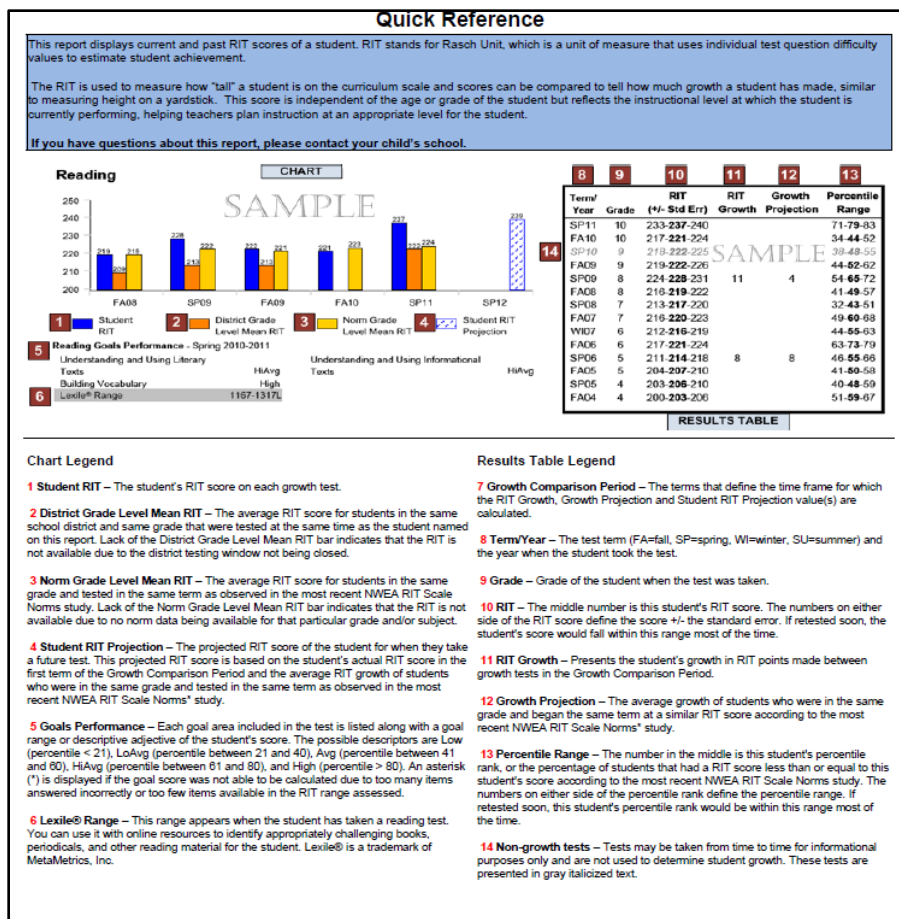
Let parents know how the student is performing in relation to district scores for their grade level. For example, you could say, "Your student is performing slightly below district benchmarks for a typical 6th grader."

For students with multiple years of MAP results, talk about the student's growth over time. If you have set class or student goals related to MAP, share those with parents, and suggest a couple of ways

they can help their child at home. Make sure they are simple, effective strategies.

Shown below are samples of what the reports look like that are shared with families. Unfortunately, the district is not able to print the reports in color. Please note that there is an explanation of terms on the back side of every report.





[Back to Guide Content](#)

MAP and College and Career Readiness

Goal setting with and by students is one step in students "owning" their learning. MAP scores have been linked to potential scores on the ACT. This information and a process will be the topic of a separate Data Use Guide.

[Back to Guide Content](#)