Testing 1-2-3 Website Overview

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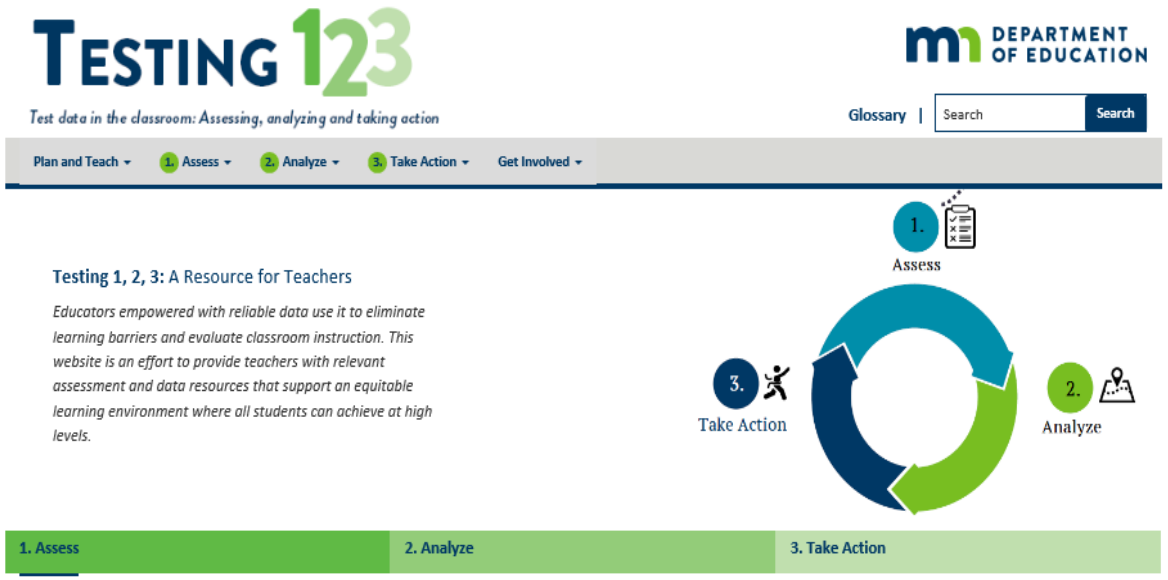
Ten Minnesota Commitments to Equity

1. **Prioritize equity.**
2. **Start from within.**
3. **Measure what matters.**
4. **Go local.**
5. **Follow the money.**
6. **Start early.**
7. **Monitor implementation of standards.**
8. **Value people.**
9. **Improve conditions for learning.**
10. **Give students options.**

Presentation Outline



1. Introduction and background
2. Assessment and Data Literacy Overview
3. Website Resources
4. Teacher involvement opportunities

Testing123.education.mn.gov

Data Quality Campaign Policy Brief - 2014

- States must do more to promote data literacy among teachers.
- States should do this by:
    1. Promoting data use skills
    2. Ensuring ease of access to data
    3. Adopting a common language around data literacy

- *The Data Quality Campaign:* **Teacher Data Literacy: It's About Time**, 2014

Why is data and assessment literacy important?

- Many teachers report feeling overwhelmed with data, rather than empowered by data as a tool for improving instruction and outcomes for students.
- There is an urgent need to support teacher data literacy through state support.
- Without it, data will continue to be a burden to teachers rather than a powerful tool for effective teaching.

- The Data Quality Campaign: **Teacher Data Literacy: It's About Time**, 2014

Background for State Testing Outreach

- 2016 – Implementation began of a federal grant (SLDS) to help build data use capacity among districts
- March 2016 – OLA evaluation of standardized testing in Minnesota
- June 2016 – MDE State Testing Division hired an Outreach Specialist
- March 2017 – OLA Report released
  - Part of OLA's Recommendation: MDE should further increase outreach and support to school districts and charter schools regarding the interpretation and use of test scores.

Background for Website

- 2017 Winter – Focus Groups started to gather initial input from educators
- 2017 Spring and Summer – First draft of Testing 1,2,3 Website
- 2018 – Second round of teacher focus groups
- 2019 Winter – New outreach specialist hired
- 2019 Spring – website redesign using feedback from teachers and admin
- 2019 Summer – Website redesign and launch!

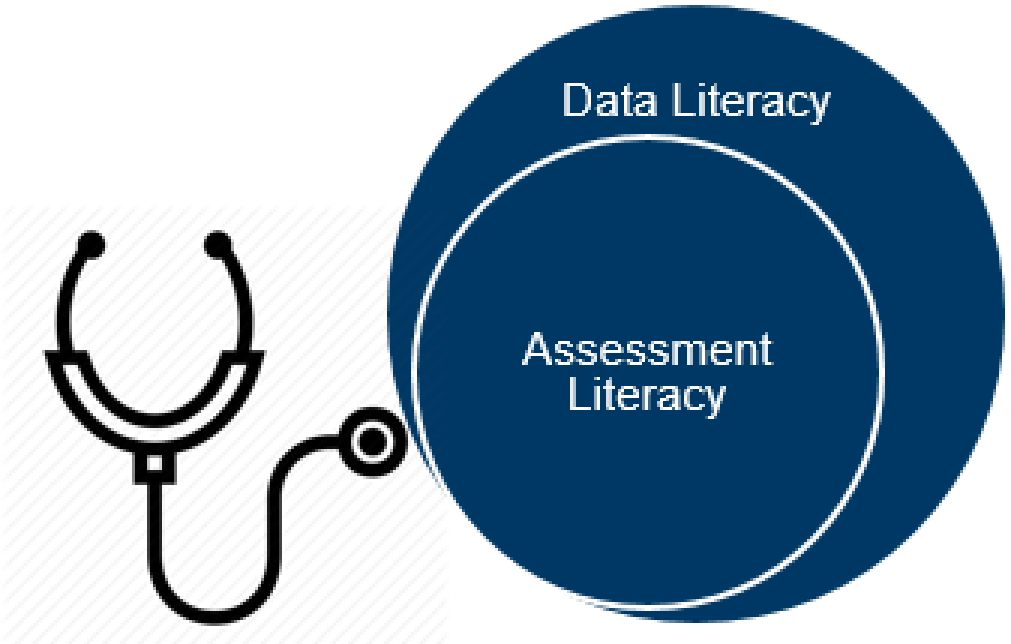
Purpose of Testing 1-2-3 Website

1. Promote teacher data use skills related to assessment of student learning
   - Outreach and support to school districts and charter schools regarding the interpretation and use of test scores.
2. Provide easier access to data and assessment resources from state testing that are specific to teachers
3. Increase teacher involvement with State Testing Division at MDE

Assessment and Data Literacy Overview

Assessment Literacy

- Assessment literate educators know **how**, **when**, and **why** to assess student learning.
- Assessment literate educators design and/or choose a variety of assessments that are able to elicit evidence of student mastery of the Minnesota Academic Standards.



Formative and Summative

Formative Assessment:

…takes place at different times **DURING** instruction.

(assessment **for** learning)

Summative Assessment:

…takes place **AFTER** instruction.

(assessment **of** learning)

A Comparison of Assessment Types

Type	Examples & Frequency	Evidence Produced	Level of Impact	Used by
Formative	• Daily Checks for Understanding • Weekly Quizzes	• Lesson sized learning targets • Retained learning across lessons and achievement level	Used to make immediate decisions about what students currently know, and where to go next	Students and teachers in classroom
Interim	Midterm Exams that occur 2-3 times per year	Cumulative, longer-term learning retention	Evaluate curriculum effectiveness and used for macro-level planning	• Groups of Teachers • School Leaders
Summative	• Unit Tests or Performance Tasks • State Tests (MCA)	Proficiency of learning compared to the Minnesota Academic Standards and Achievement Level Descriptors	Used for accountability and evaluation of curriculum in regards to the standards	• Groups of Teachers • School, District Leaders • Policy Makers

Student Centered Assessment Systems

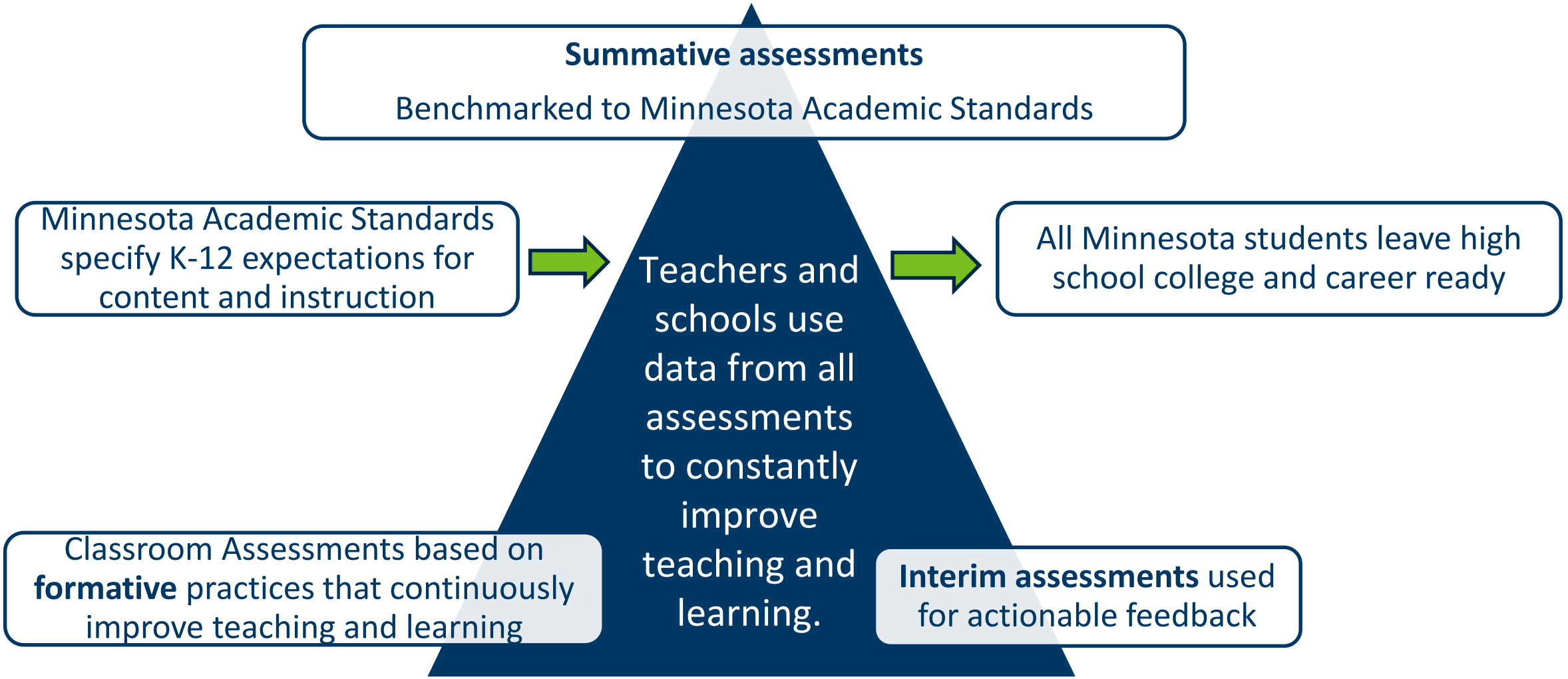
- Assessment systems, when implemented effectively, can cause students to learn, not just simply measure student performance.

  - Stiggins and Chappuis, ***Theory into Practice (2005)***

- When students see evidence of their success on classroom formative assessments, they can watch themselves grow as learners. This cannot come from MCA results which are too infrequent.

- If students track their progress on learning goals aligned to Benchmarks and ALDs, they gain a better sense of control and confidence in their own learning.

Comprehensive and Balanced Assessment System



Minnesota Assessment Data: One Component

Data Literacy

Data literate educators **continuously, effectively,** and **ethically access, interpret, act on, and communicate multiple types of data** from state, local, classroom, and other sources in order to **improve outcomes** for **students** in a manner appropriate to their professional roles and responsibilities.

- *The Data Quality Campaign:* Teacher Data Literacy: It's About Time, 2014

Minnesota Assessments

Standards-Based Accountability Assessments

- **MCA**
- **MTAS**

English Language Proficiency Accountability Assessments

- **ACCESS for ELLs**
- **Alternate ACCESS for ELLs**

Purposes of Minnesota Assessments

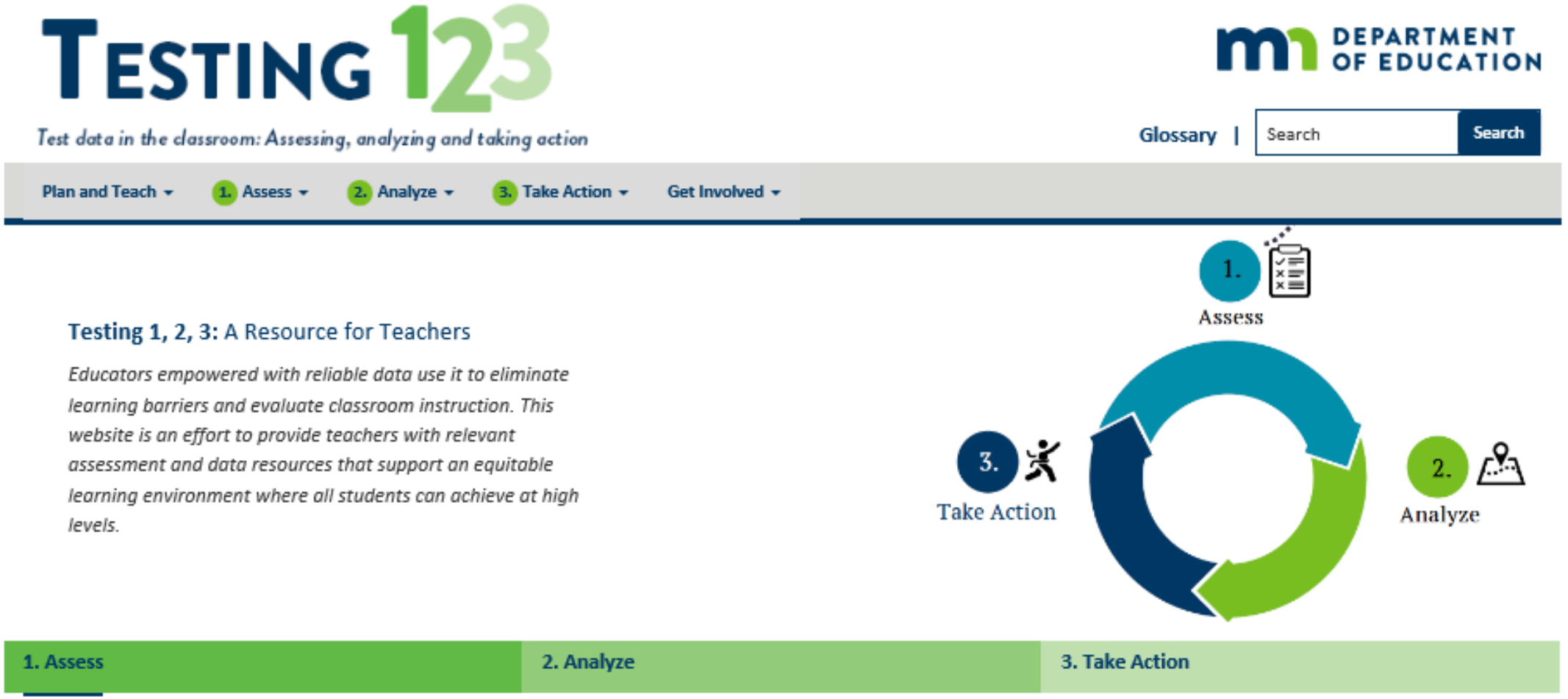
- ❑ To measure achievement
- ❑ To measure academic progress

Minnesota Assessments: Aligned to Standards

Test Names	Standards	Year Adopted
MCA and MTAS	Minnesota K–12 Academic Standards in English Language Arts	2010
	Minnesota K–12 Academic Standards in Mathematics	2007
	Minnesota K–12 Academic Standards in Science	2009
ACCESS and Alternate ACCESS for ELLS	WIDA English Language Development Standards	2011

Website Resources

Testing 1-2-3: New look!



Plan and Teach Resources

- Standards Based Learning Goals
- Success Criteria
- MCA Test Structure – by subject
- MCA Content Resources – by subject
- Released MCA Questions from Past Exams

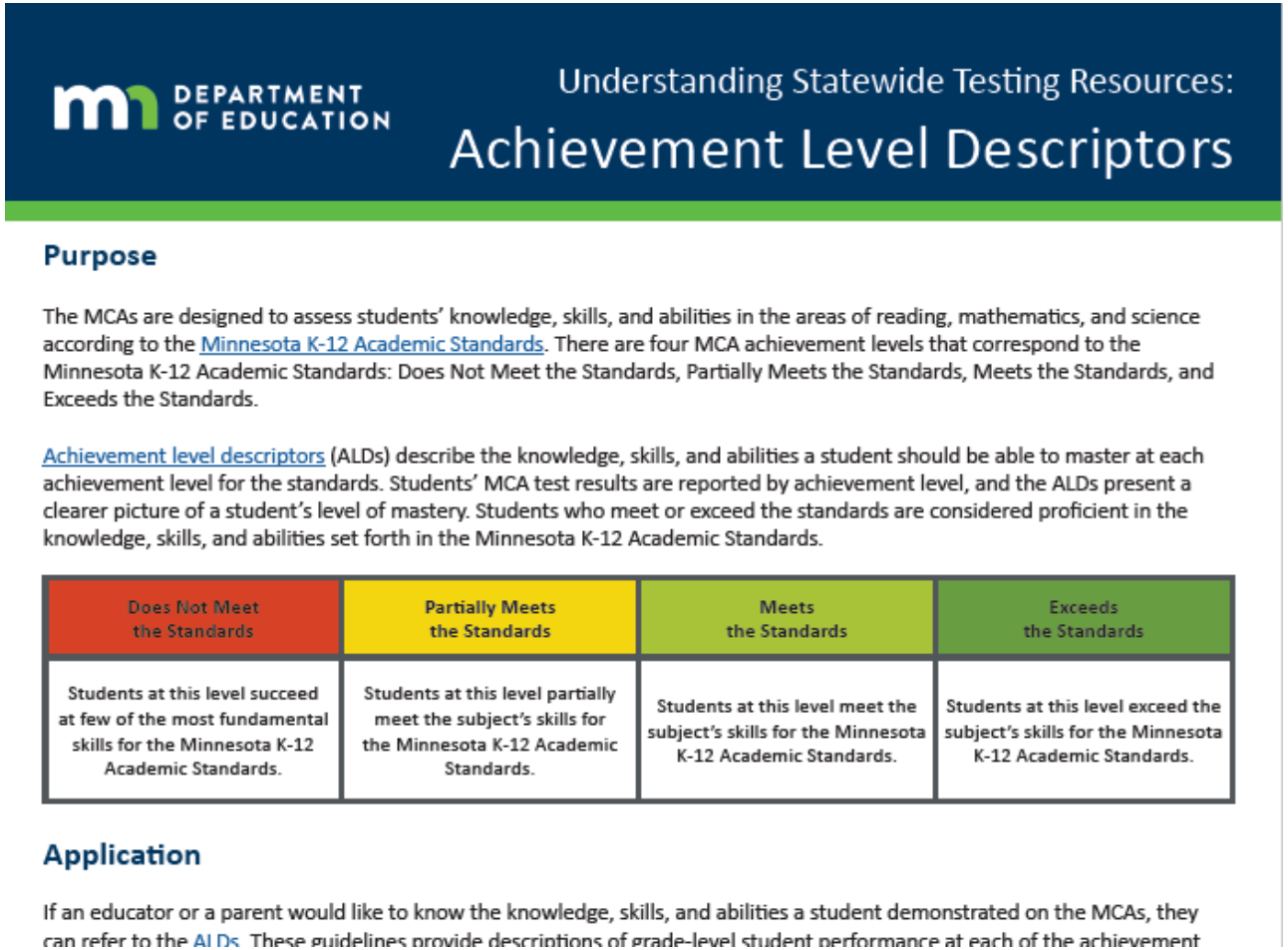
Standards Based Learning Goals

- Daily learning goals should be aligned to the Minnesota Academic Standards, and communicated directly to students.
- A student centered assessment system instills a growth mindset, and helps students engage in their own learning.

Learning Targets	Clear	Not Clear
1. I can identify the main idea in fiction and non-fiction text.	✓	
2. I can identify the concepts associated with culture.		✓
3. I can sort and classify objects using one attribute.	✓	
4. I can compare the functions of carbohydrates and proteins.	✓	
5. I can study the characteristics of sea creatures.		✓
6. I can identify parallel and perpendicular lines.	✓	

Success Criteria

- **Assessments must accurately reflect clearly specified and appropriate achievement expectations.**
- Teachers "unpack" Minnesota Academic Standards and translate them into Learning Targets that articulate what mastery looks like
- Use Achievement Level Descriptor (ALD) resources to analyze depth and breadth of curriculum



DEPARTMENT OF EDUCATION

Understanding Statewide Testing Resources:

Achievement Level Descriptors

Purpose

The MCAs are designed to assess students' knowledge, skills, and abilities in the areas of reading, mathematics, and science according to the Minnesota K-12 Academic Standards. There are four MCA achievement levels that correspond to the Minnesota K-12 Academic Standards: Does Not Meet the Standards, Partially Meets the Standards, Meets the Standards, and Exceeds the Standards.

Achievement level descriptors (ALDs) describe the knowledge, skills, and abilities a student should be able to master at each achievement level for the standards. Students' MCA test results are reported by achievement level, and the ALDs present a clearer picture of a student's level of mastery. Students who meet or exceed the standards are considered proficient in the knowledge, skills, and abilities set forth in the Minnesota K-12 Academic Standards.

Does Not Meet the Standards	Partially Meets the Standards	Meets the Standards	Exceeds the Standards
Students at this level succeed at few of the most fundamental skills for the Minnesota K-12 Academic Standards.	Students at this level partially meet the subject's skills for the Minnesota K-12 Academic Standards.	Students at this level meet the subject's skills for the Minnesota K-12 Academic Standards.	Students at this level exceed the subject's skills for the Minnesota K-12 Academic Standards.

Application

If an educator or a parent would like to know the knowledge, skills, and abilities a student demonstrated on the MCAs, they can refer to the ALDs. These guidelines provide descriptions of grade-level student performance at each of the achievement

https://testing123.education.mn.gov/test/plan/success/ > ALDs

Success Criteria (2)

https://testing123.education.mn.gov/test/plan/success/ > ALDs

Minnesota Department of Education

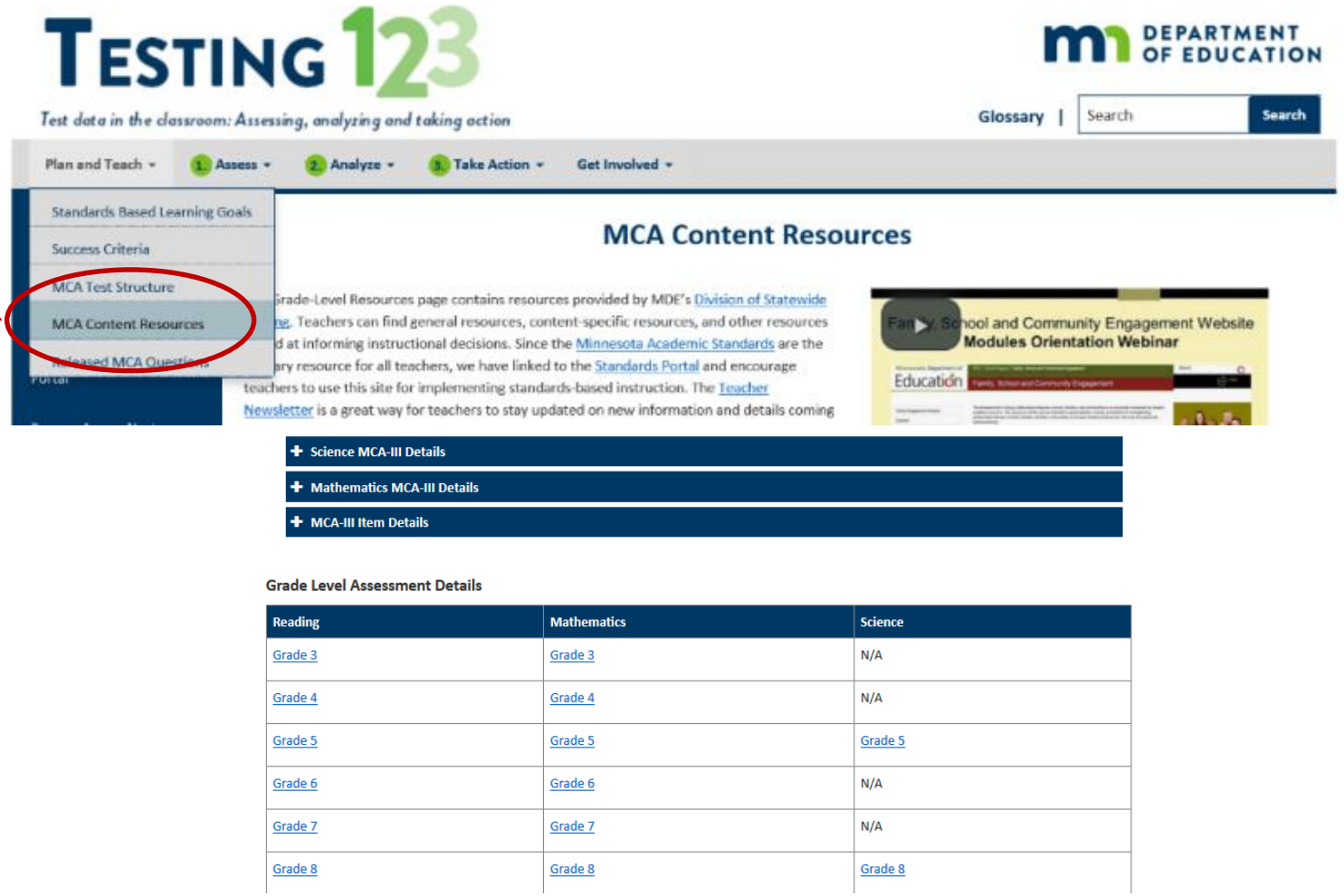
High School Science MCA-III Achievement Level Descriptors

These are supplementary materials to the Science MCA Achievement Level Descriptors. The overview for the MCA Achievement Level Descriptors and how to interpret them are on the MDE website at MDE > Districts, Schools and Educators > Statewide Testing > Achievement Level Descriptors.

Strand	Does Not Meet Students at this level of science succeed at few of the most fundamental science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:	Partially Meets Students at this level of science partially meet the science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:	Meets Students at this level of science meet the science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:	Exceeds Students at this level of science exceed the science skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:
Nature of Science and Engineering	• Determines the appropriate safety procedures for a scientific investigation • Understands what a hypothesis is • Identifies the benefits of using scientific models	• Identifies sources of error in an investigation • Understands that engineering designs are continually checked so that they can be improved • Recognizes that scientific knowledge occurs in steps that build on prior knowledge • Selects appropriate graphical representations to communicate results • Identifies a scientific hypothesis	• Describes how changes in scientific knowledge usually builds on earlier knowledge • Explains how bias might influence how research is done and the interpretation of data • Recognizes that risk analysis is used to evaluate consequences of an engineered solution • Evaluates possible solutions to an engineering problem at a local and regional level • Uses appropriate numeric, or graphical representations to communicate a scientific idea • Suggests ways to improve data collection • Designs and conducts an experiment to test a hypothesis	• Formulates a hypothesis and conducts an experiment to test this hypothesis • Supports a conclusion with evidence from the investigation • Develops possible solutions to an engineering problem in a global context
Life Science	• Understands that photosynthesis converts light energy into chemical energy • Identifies how competition for resources affects population growth • Recognizes the primary function of DNA • Identifies how air quality affects personal health	• Uses words to describe the process of photosynthesis • Identifies DNA, genes and chromosomes • Matches base pairs of DNA • Recognizes characteristics of sexual and asexual reproduction • Recognizes that genetic variation is essential for natural selection to occur • Identifies the ecological risks and benefits of changing a natural ecosystem by human activity • Identifies inputs and expected outputs of simple natural and designed systems	• Explains how cell parts and processes respond to environmental factors and their functions in respiration, reproduction and photosynthesis • Identifies primary functions of some biological molecules • Describes the role of DNA and RNA in assembling protein molecules • Recognizes how internal and external factors affect biological systems • Explains how energy is transferred among organisms in an ecosystem • Uses equations to differentiate between photosynthesis and respiration • Uses Mendel's laws of segregation and independent	• Recognizes structures of biological molecules • Describes and differentiates between the processes of replication, transcription and translation of nucleic acids • Understands the consequences of human activity on living organisms and ecosystems • Describes matter transformations and the dissipation of energy as heat in a natural ecosystem

MCA Test Structure

- Subject and grade level specific Documents
- Created from Test Specs and Test Blueprint



MCA Test Structure (2)

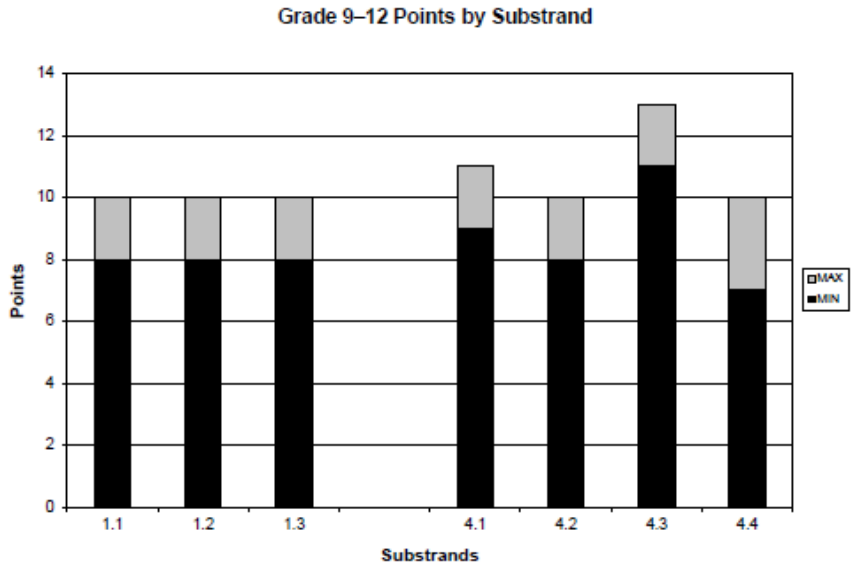
- Useful for planning Scope & Sequence, Pacing Calendars, improving curriculum alignment, etc.
- Caution: This is only *one* resource to help with pacing and should not be the only resource used

https://testing123.education.mn.gov/test/plan/res/index.htm

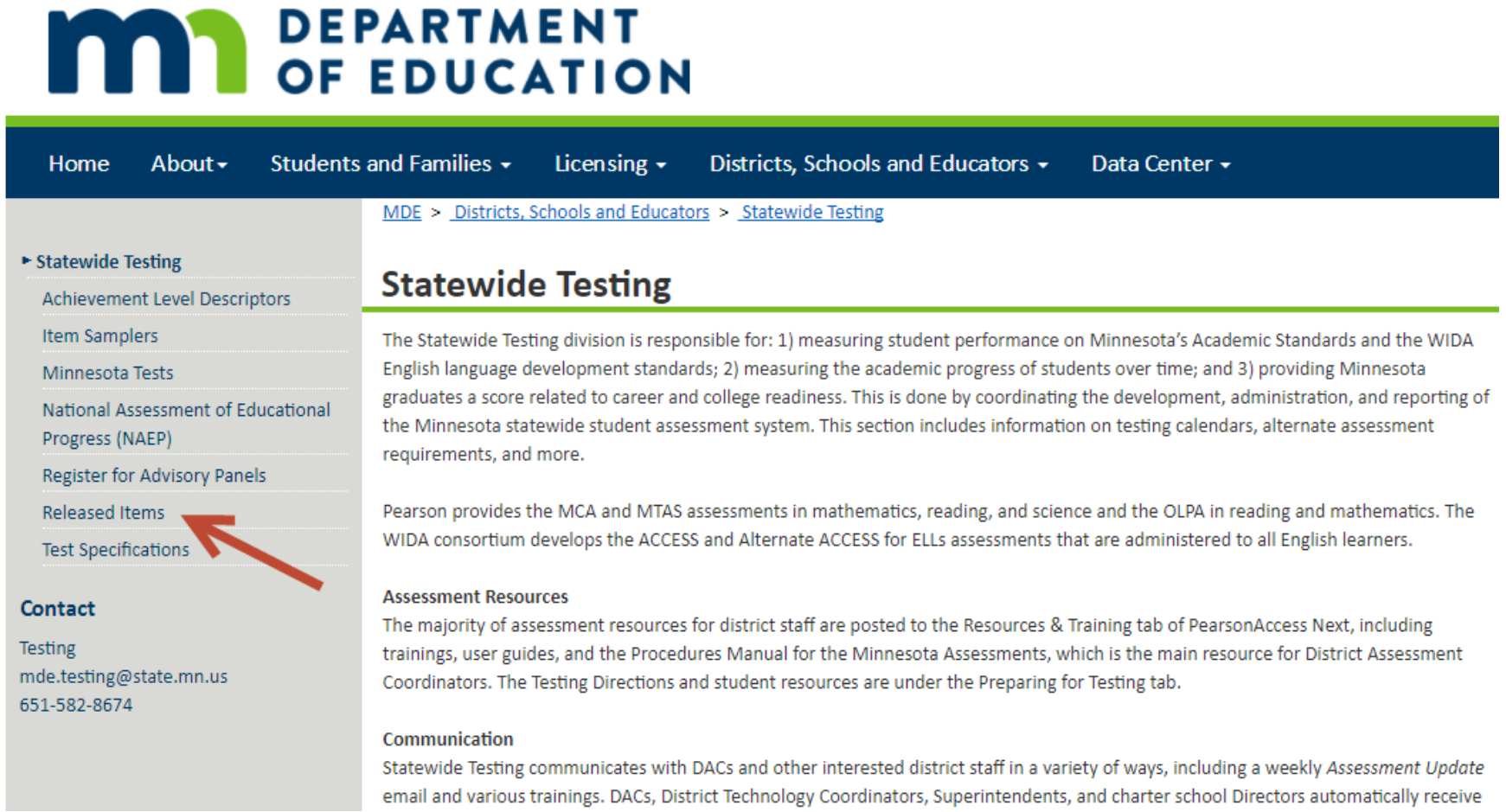
Grade 9-12 Science MCA-III (Operational Form)

Strand	Approximate Number of Points	Approximate Percent of Points
Nature of Science and Engineering (NSE)	24-28	38
Life Science (LS)	40-44	62
Total	68	100

Points by Substrand



Released Items and Passage Sets (2)



Released Items and Passage Sets

MCA Grade 3 Sample Item

The table shows the cost of apples.

Apple Prices

Pounds of Apples	Price
2	$4
4	$8
6	$12
?	$18

Ben paid $18 for apples at the grocery store.

How many pounds of apples did Ben buy?

- A. 7
- B. 8
- C. 9
- D. 12

https://testing123.education.mn.gov/test/plan/ques/index.htm

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How many pounds of apples did Ben buy?

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C. 9

D. 12

Student Misconceptions

RATIONALE A	The student may have thought the table was going in consecutive numeric order and chose 7 pounds since 6 was the last number of pounds in the table.
RATIONALE B	The student may have thought that the number of pounds of apples has to be a "plus 2" pattern and may not have taken the output values into consideration.
RATIONALE C	Correct - The student recognized that the input value is multiplied by 2 to get the output value and therefore recognized that 9 pounds of apples costs $18.
RATIONALE D	The student may have thought the pattern was to add 6 to the input value based on the last row of data in the table and therefore subtracted 6 from 18 to get an input value of 12.

Answer Selected	Percent of Students Who Selected It
A	2%
B	59%
C	35%
D	5%

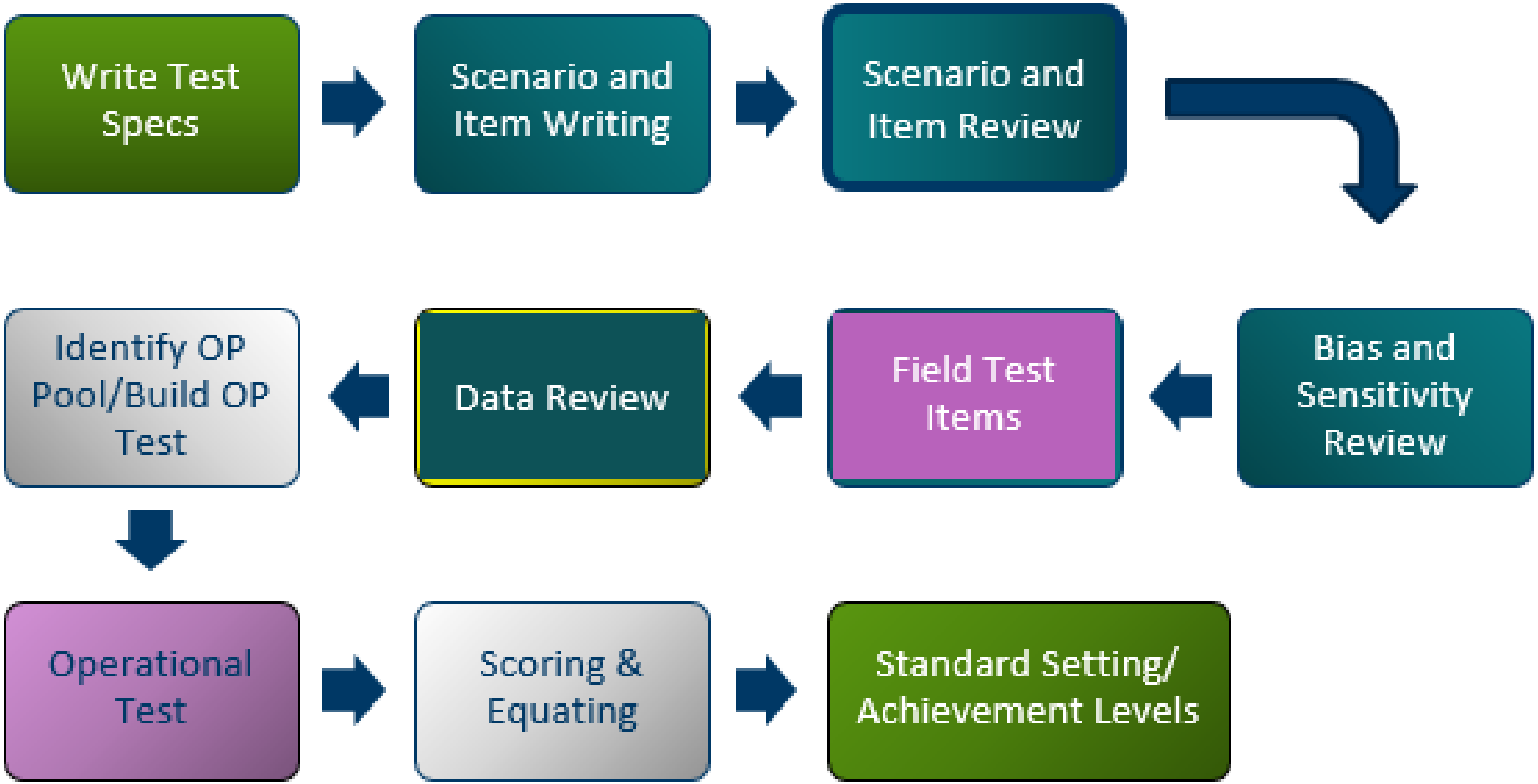
Using the Item Samplers in Formative Assessment

- Exit Slip after that standard is taught
- Warm-Up Questions at beginning of class
  - Use to gauge prior understanding before teaching the lesson
  - Use to gauge their level of understanding the day after teaching the concept
- Not intended to be used for making full-length practice tests
- NAEP Questions tool to be added in future directly on Testing 1-2-3

Assess Resources

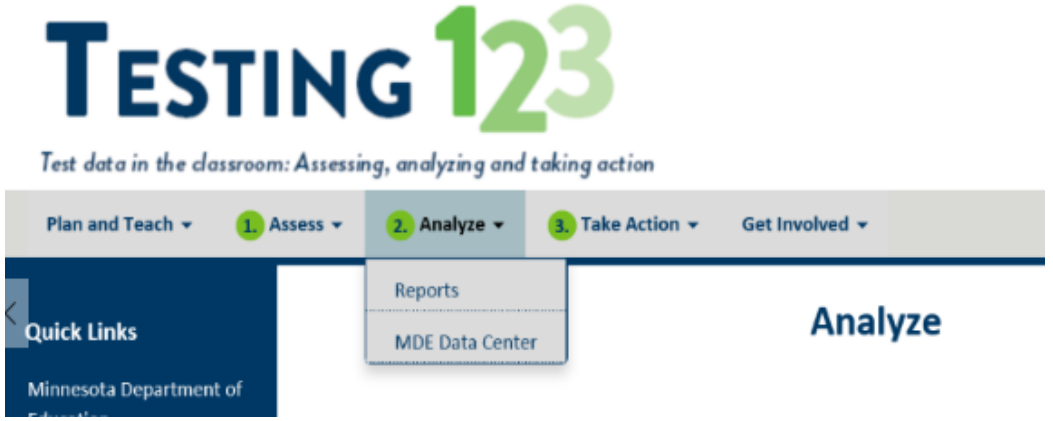
- Assessment Videos – explain types of assessments and examples, adapted from Wisconsin
- Components of a Comprehensive and Balanced Assessment System
- Formative, interim, and summative assessment resources

Test Development Process at MDE



Analyze Resources

- MCA Scale Score Resources
- Guides for Interpreting Various Score Reports (ISR, Benchmarks, etc.)
- Guide for Understanding MCA and MTAS Rosters
- Data Center Overview



Scale Score Definitions

Theta (θ)

The estimate of "ability" (performance)

- Theta range for Minnesota Assessments [-3 to 3]

Scale Score (SS)

The theta/ability estimate is transformed into the scale score via transformation

- MCA-III scale scores are from X01-X99 (X = grade)

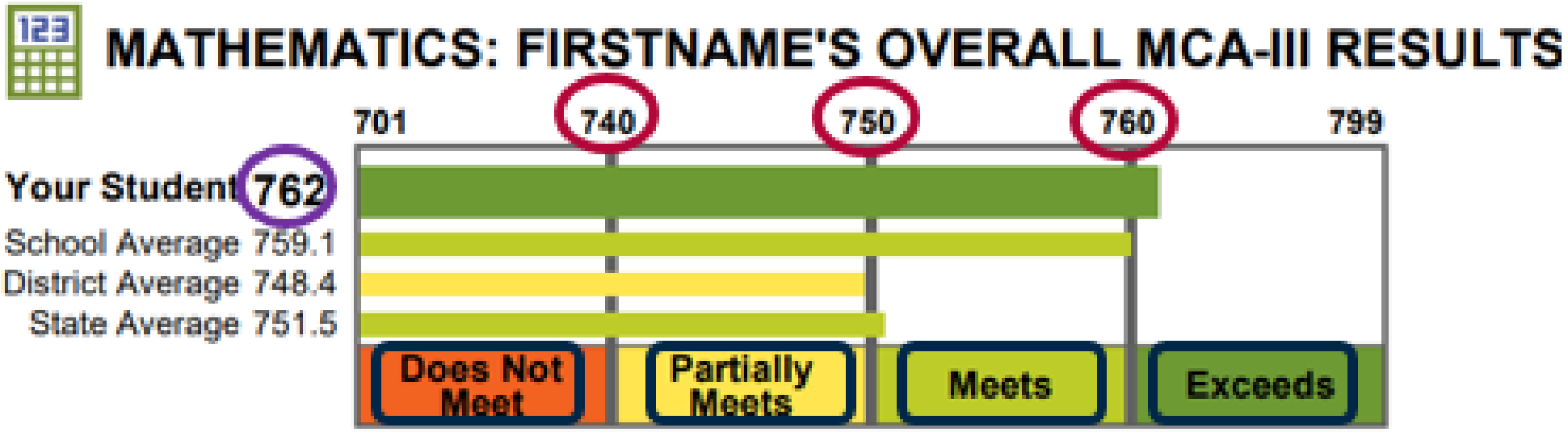
Achievement Level Descriptors (ALDs)

Describes the level of student achievement (Does not meet standards, Partially Meets Standards, Meets Standards, Exceeds Standards)

Where you see scale scores and ALDs
(*Individual Student Report – ISR*)

Scale Score (SS)
(theta transformed)

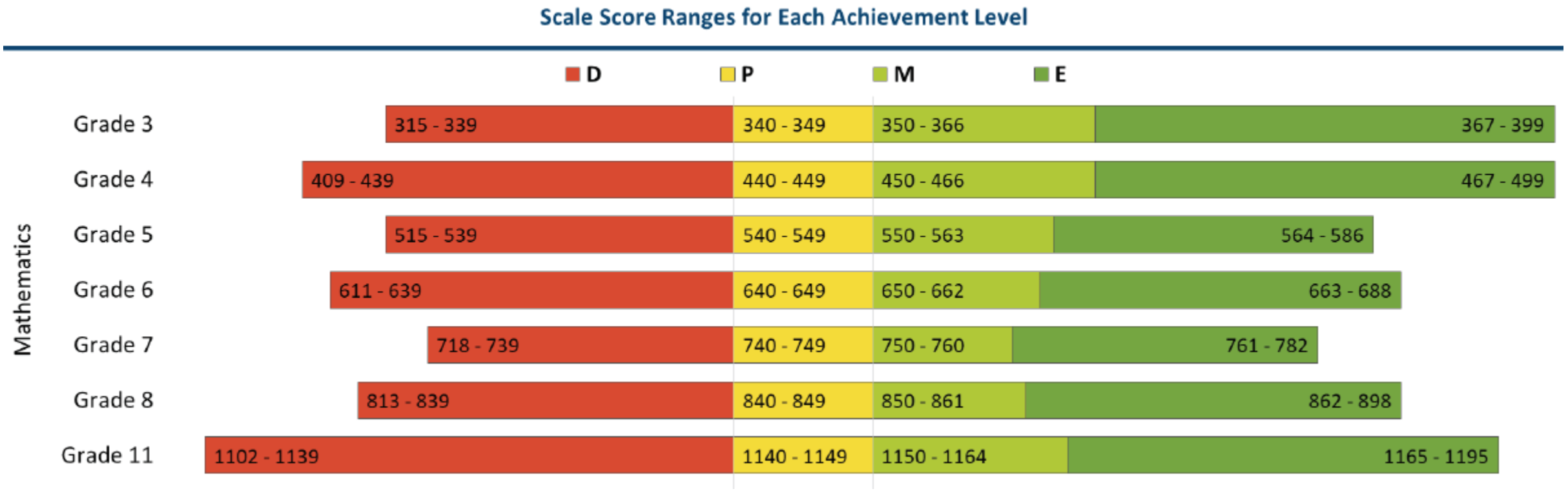
Cut Scores (based on the ALDs)



Achievement Levels

Scale Scores Continued

https://testing123.education.mn.gov/test/analyze/report/ > Resources > Understanding MCA Scale Scores

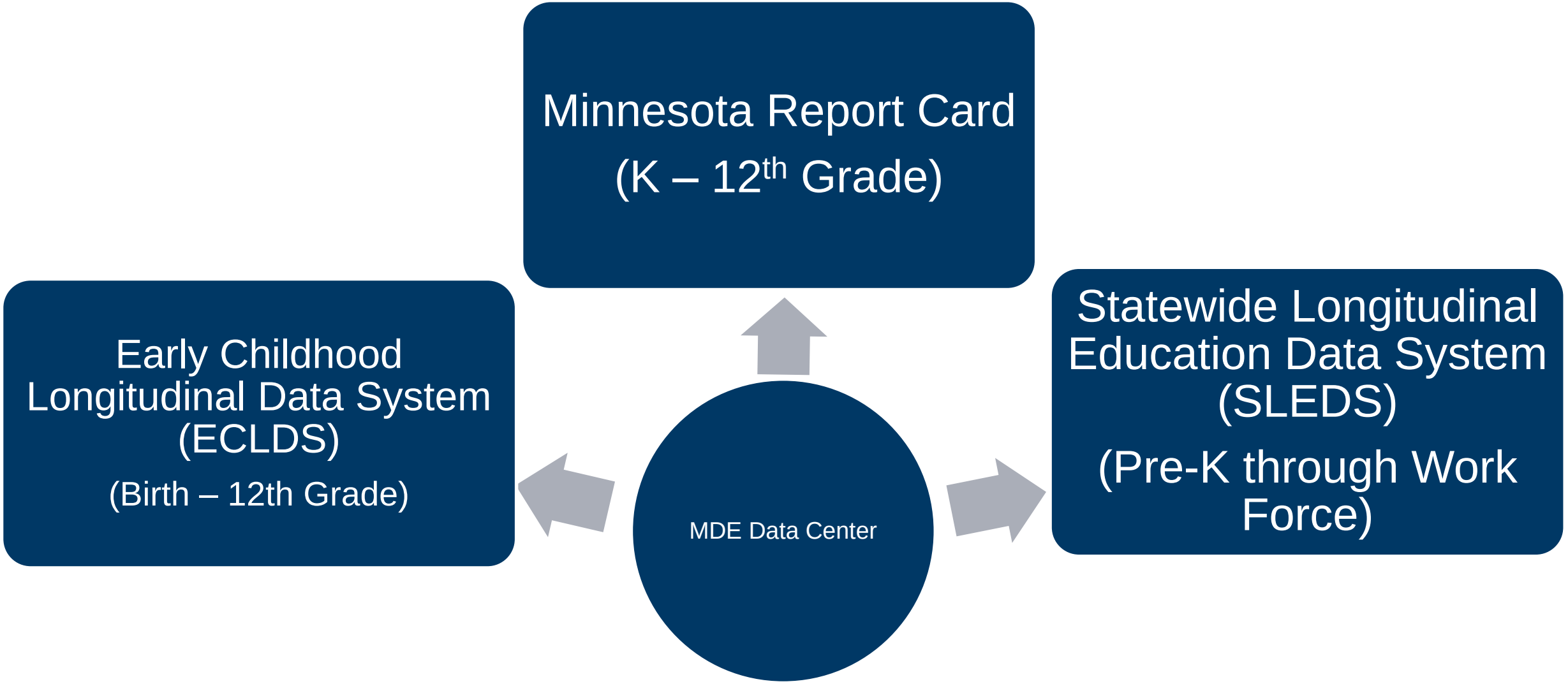


Appropriate use of Scale Scores

- MCA scale scores are based on grade-level specific content
- In technical terms, this means the scores are not “vertically aligned”
- Scale scores should never be compared across the grades for a particular student, especially when determining if a student has no growth, remained the same, or improved.
- The achievement levels CAN be used to assess whether student growth across grades is demonstrated.

https://testing123.education.mn.gov/test/analyze/report/ > Resources > Where do Scale Scores Come from?

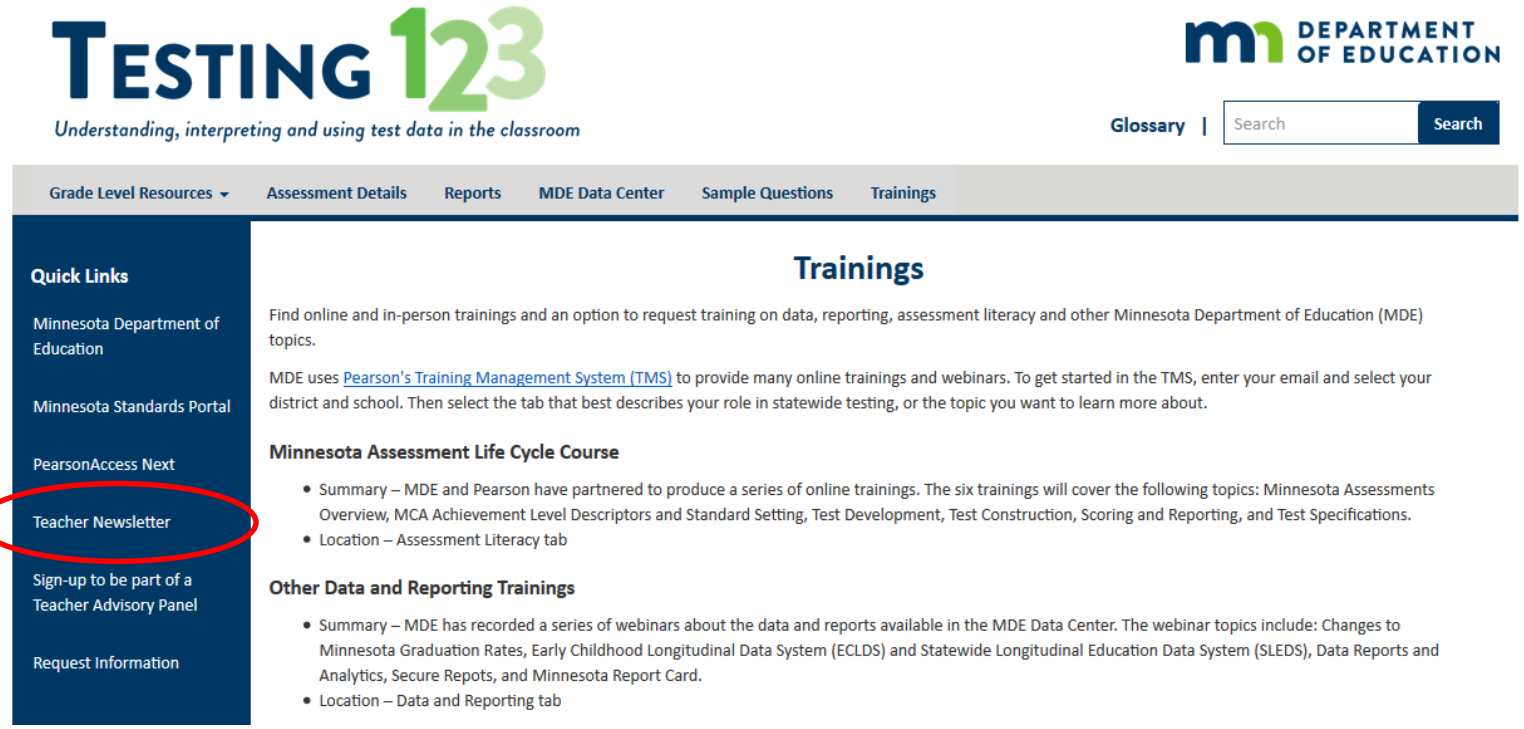
MDE Data Center: Mobile Analytics



Teacher Involvement with State Testing

Get Involved with MDE State Testing

- If you would like to receive updates about assessment information relevant to teachers, please sign up for the Newsletter on the website
- Or you can send an email request to mde.testing@state.mn.us OR kendra.olsen@state.mn.us



MCA Teacher Review Panel

- Please forward website link to your building Principals, who can share with teachers.
- Teachers can register in the MDE Advisory Panel database – linked on Testing 123 site

Benefits:

1. Teachers will see upcoming MCA Questions.
2. You will receive compensation for a sub if during the school year.
3. Opportunity to improve test for students

Questions and feedback

Please take the remaining time to complete the paper feedback form, explore the website, and ask any questions about the website.

Testing123.education.mn.gov

Thank you!

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