MINNESOTA BOARD OF TEACHING

Assessment of Reading Instruction for Teacher Licensure

Report to the Legislature

As required by
2009 Minnesota Laws, Chapter 96
Article 2, Section 66

December 2011

MINNESOTA BOARD OF TEACHING

EXECUTIVE DIRECTOR:

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Assessment of Reading Instruction

for Teacher Licensure

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Upon request, this report can be made available in alternative formats.

2009 Minnesota Laws Chapter 96
Article 2, Section 66

Sec. 66. **ASSESSMENT OF READING INSTRUCTION.**

   (a) By February 1, 2012, the Board of Teaching shall administer the assessment of reading instruction portion of the examination of licensure-specific teaching skills for all candidates for initial licenses to teach prekindergarten or elementary students, consistent with Minnesota Statutes, section 122A.09, subdivision 4, paragraph (e).

(b) The Board of Teaching shall report to the legislative committees with jurisdiction over prekindergarten through grade 12 education policy by March 15, 2011, on the assessment of reading instruction portion of the examination of licensure-specific teaching skills under paragraph (a).

EFFECTIVE DATE. This section is effective the day following final enactment and applies to teacher candidates beginning February 1, 2012.

ESTIMATED COST OF PREPARING THIS REPORT

Minnesota Statute §3.197 require the following:
> *"A report to the legislature must contain, at the beginning of the report, the cost of preparing the report, including any costs incurred by another agency or another level of government."*

Special funding was not appropriated for the cost of preparing this report.

This report required the collection of information that the Board of Teaching (BOT) does not compile as part of its normal business functions. It was therefore necessary to gather, analyze and organize information in order to prepare this report. The cost of preparing this report includes estimates of BOT information collection costs as well as the estimated costs of the providers of the information.

The estimated cost incurred by the Minnesota Board of Teaching in preparing this report is $1,175.56. Most of these costs involved staff time in gathering, analyzing and organizing data as well as preparing the written report. Incidental costs include paper, copying and other office supplies.

Report Outline

I.   Background Information

II.   Revised Reading Standards and Licensure Requirements
   a. Early Childhood and Elementary Education Licenses
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Background Information
In January 2007, the Minnesota Board of Teaching authorized a task force of individuals with expertise in reading, teacher preparation and reading teacher development (K-12). University researchers, highly qualified classroom teachers, administrators, reading specialists, consultants, parents, reading organization leaders and state department professionals comprised the appointed task force. These individuals are listed below:

John Alexander, Headmaster, Groves Academy
Karen Balmer, Executive Director, Minnesota Board of Teaching
Karen Bihrle, Minnesota State Department of Education
Eva Boehm, Minnesota Reading Association
Teresa Christenson, Assistant Professor, Hamline University
Deborah Dillon, Professor, University of Minnesota
Claire Eckley, International Dyslexia Association
Garnet Franklin, Education Minnesota
JoAnne Glasgow, Professor, Southwest Minnesota State University
Carolyn Gwinn, Literacy Specialist, Anoka-Hennepin Schools
Bonnie Houck, Reading Specialist, Minnesota Department of Education
Gail Jordan, Associate Professor, Bethel College
John Melick, Director, Educator Licensing Division, Minnesota Department of Education
Amy Smith, University of St. Thomas
Susan Thomson, Parent Advocate
JoAnn Van Aernum, Teacher Education Specialist, Minnesota Department of Education

Note: Additional organizations represented by task force members include: Minnesota Association of Colleges for Teacher Education, Minnesota Reading Association, Minnesota Academy of Reading, Minnesota Reading License Coalition and the Minnesota Literacy Coalition.

The charge from the Minnesota Board of Teaching (BOT) to the Reading Task Force was to develop recommendations addressing the initial preparation and continued development of teachers of reading in Minnesota. As the BOT Reading Task Force initiated their work, they posed the following question:

"What knowledge, skills and practices do birth to grade 12 pre-service teachers (initial licensure), novice and experienced classroom teachers (licensure renewal), teachers with advanced reading knowledge and reading leaders, need to know and be able to do to best support the learning needs of all readers in their classrooms?"

The work of the Reading Task Force was based on a deep foundation of relevant research and literature and their vision was to establish a multi-pronged framework to support the reading development of PreK-12 students in Minnesota, including intervening and providing specific help to these readers when needed by educators with expertise in reading. The first component in the multi-pronged approach relates to the initial preparation for teachers to work with students in the area of reading. This initial preparation occurs in teacher preparation (licensure) programs in colleges and universities, but also continues into a teacher's beginning years in the profession. Continually building upon and refining teachers' knowledge about reading processes and practices throughout their careers is the second component of a multi-pronged approach to teacher learning and development. The final component is equipping teachers to assume new roles related to reading instruction and literacy leadership in their schools or districts. The Board of Teaching directly addressed the first and third components, initial licensure and reading endorsements, in the subsequent rulemaking process. The second component,

continued growth for all teachers in the area of reading is addressed in Minnesota law as a license renewal requirement (Minn. Stat. 122A.09, Subdivision 4(m)).

In addition to a review of standardized test score data, including both the National Assessment of Educational Progress (NAEP) and the Minnesota Comprehensive Assessment (MCA), task force members relied on a deep foundation of research in the development of the new standards. See *Appendix A* for a listing of the research used by the task force.

The task force process was collaborative and inclusive, with broad stakeholder participation (including a wide variety of reading groups, teachers, organizations and legislators) at multiple junctures to ensure that diverse perspectives and input would be reflected in the final rule drafts. As a result, it was a tremendously complex process. There is great passion around reading and reading instruction and the passions are not always rooted in the same core beliefs and philosophical underpinnings. However, the Board believes that the adopted rules not only reflect the complexities of these issues, but will serve us well as a catalyst for meaningful change in the way that we prepare teachers in the area of reading.

All Board of Teaching rules are available online: https://www.revisor.mn.gov/rules/?id=8710

Revised Reading Standards and Licensure Requirements

The task force work resulted in substantial changes to the existing landscape of reading-related licensure requirements and options. See **Table A** for a summary of the licensure fields impacted by the task force work and subsequent rulemaking process.

Table A

Rule number	Rule Name	Licensure Scope
8710.3000	Teachers of Early Childhood Education	Birth - Grade 3
8710.3200	Teachers of Elementary Education	Grades K-6
8710.3310	Middle Level Endorsement License: Communication Arts and Literature	Grades 5-8
8710.3320	Middle Level Endorsement License: Mathematics	Grades 5-8
8710.3330	Middle Level Endorsement License: Social Studies	Grades 5-8
8710.3340	Middle Level Endorsement License: General Science	Grades 5-8
8710.4000	Teachers of Adult Basic Education	Age 16+
8710.4050	Teachers of Agricultural Education	Grades 5-12
8710.4200	Teachers of Business	Grades 5-12
8710.4250	Teachers of Communication Arts and Literature	Grades 5-12
8710.4450	Teachers of Family and Consumer Sciences	Grades 5-12
8710.4500	Teachers of Health	Grades 5-12
8710.4550	Library Media Specialists	Grades K-12
8710.4600	Teachers of Mathematics	Grades 5-12
8710.4650	Teachers of Vocal Music and of Instrumental Music	Grades K-12
8710.4700	Teachers of Physical Education	Grades K-12
8710.4725	Teachers of Reading	Grades K-12
8710.4750	Teachers of Science (Chemistry, Earth & Space Science, Life Science, Physics)	Grades 9-12
8710.4800	Teachers of Social Studies	Grades 5-12
8710.4850	Teachers of Technology	Grades 5-12
8710.4900	Teachers of Visual Arts	Grades K-12
8710.4925	Reading Leader	

As shown by the color coding in *Table A,* the specific licensure areas impacted were clustered into three groups:

1. Blue: Early Childhood Education (Birth – Grade 3) & Elementary Education (Grades K-6)
2. Orange: Content-Specific Licenses
    Agriculture (5-12)
    Business (5-12)
    Communication Arts & Literature (5-12)
    Family and Consumer Sciences (5-12)
    Health (5-12)
    Library Media Specialists (K-12)
    Mathematics (5-12)
    Middle School (5-8): Communication Arts, Math, Science, Social Studies
    Physical Education (K-12)
    Science (9-12): Physics, Chemistry, Life Science, or Earth & Space Science
    Social Studies (5-12)
    Technology (5-12)
    Visual Arts (K-12)
    Vocal & Instrumental Music (K-12)
3. Green: Reading Endorsements
    Teacher of Reading Endorsement
    Reading Leader Endorsement

Early Childhood Education and Elementary Education Licenses

The Early Childhood license spans from birth through grade 3 and the Elementary Education license spans grades K-6. A strong body of research and literature suggests that if a student is not reading at grade level by the end of grade 3, he is at significantly greater risk of falling further behind academically and not completing a full K-12 education. Therefore, teachers of children through grade 3 play a critical role in ensuring that these young children are able to read at grade level and in cases where they are struggling, are able to administer assessments and provide appropriate interventions. For these reasons, the Early Childhood and Elementary licenses were discussed together and the adopted standards are identical for these two licensure fields.

For both of these fields, the revised standards articulate the requisite knowledge and skills for teachers across five critical areas:

- Foundational Knowledge
- Instructional Strategies and Materials
- Assessment, Diagnosis, Evaluation and Intervention
- Creating a Literate and Motivating Environment
- Professionalism

Content-Specific Licenses

The intent of the revised rules is **not** to make content-specific teachers into reading teachers. However, the Board of Teaching, as informed by the task force and other stakeholders, believed that these teachers must have foundational knowledge and skills in reading, as reading is central to success in each of these content areas. Success in reading translates into success in these content areas.

The proposed rules would create a common and more specific universe of preparation for pre-service teachers in these fields. Over half of our preparation programs currently require some type of a "Reading in the Content Area" course. The proposed standards are intended to be covered in such a

course, which are typically three credits. They are not intended to take additional time away from preparation in the specific content area.

While there are similarities in the proposed reading language between licensure rules, each rule was tailored to the specific needs and particularities of the discipline. Task force members reviewed literature specific to each content area and input was received from stakeholders with expertise in these areas. The resulting changes reflect both the research and input from stakeholders.

For each of these fields, the revised standards articulate the requisite knowledge and skills for teachers across five critical areas:

- Foundational knowledge of the reading process
- Instructional strategies used across various content areas
- Specific reading competencies for each discipline

Reading Endorsements

Prior to the task force work and subsequent rulemaking process there was one reading endorsement option for teachers, MN Rule 8710.4725: Teachers of Reading. The task force work led to a revised Teacher of Reading endorsement and the establishment of an additional reading endorsement called Reading Leader. An endorsement cannot be earned as a stand-alone license; rather it can only be earned by an already licensed teacher who is adding this field of licensure. An endorsement licensure program is generally a shorter course of study than a full licensure program.

1. *Teachers of Reading, MN Rule 8710.4725*

This endorsement was originally developed and effective in 2003 in response to a legislative directive. The existing Teacher of Reading endorsement is intended for a site-based individual working with struggling readers.

> **Note:** The Scope of Practice (Subpart 1) makes it clear that the Teacher of Reading endorsement is not required for elementary teachers to teach reading in their self-contained classroom or for special education teachers to deliver special education services.

2. *Reading Leader, MN Rule 8710.4925*

Unlike the Teacher of Reading endorsement, which is intended for teachers who have direct student contact at the site level, this endorsement is intended for teachers who have district-wide responsibilities (ie: curriculum adoption, staff development planning and training). The Board did not establish this endorsement as a requirement for any teacher, but believe that it would serve as a valuable tool for those serving in these capacities and that there are substantial numbers of teachers who would pursue such a licensure option.

Proposed Reading-Related Requirements for Special Education Teachers
The Board of Teaching is currently in the final stages of a rulemaking process to revise and strengthen the preparation of all Special Education teachers. Throughout the revision process a great deal of time was devoted to discussing reading preparation for Special Education teachers and the appropriate placement of reading preparation requirements within the proposed licensure structure. With help from the disability-specific specialists from the Minnesota Department of Education, the Technical Writing Team embedded language unique to the literacy needs of each student population and also included a common standard in Subpart 3C: Instructional design, teaching and ongoing evaluation stating that a teacher must be able to:

> *(1) integrate knowledge of evidence-based instruction, including scientifically-based research interventions when available, in language development, reading, writing and math with characteristics of developmental disabilities in order to design, implement, monitor and adjust instruction aligned with grade-level content standards*

In addition to language in each of the disability areas, the Core Skills draft includes the following references specific to reading preparation for special education teachers:

> ***Note:*** *The Core Skills is a series of broad pedagogical standards required for all Special Education teachers.*

Subpart 1. Licensure requirements.
B. A candidate recommended for licensure in special education shall meet the statutory requirements regarding comprehensive scientifically-based reading instruction as required by Minnesota Statute 122A.09, subdivision 4e and as specified in Minnesota Rule 8710.3200, subparts 3C, 3D, 3E and 3F.

Subpart 3C. Instructional design, teaching and ongoing evaluation. … The teacher must be able to:
(10) apply knowledge of comprehensive scientifically-based reading instruction including phonemic awareness, phonics, fluency, vocabulary development and reading comprehension;

Subpart 3. Program requirements.
B. All colleges and universities approved by the Board of Teaching to prepare persons for classroom teacher licensure must include in their teacher preparation programs research-based best practices in reading, consistent with section 122A.18, subdivision 2a, that enable the licensure candidate to know how to teach reading in the candidate's content areas.

This language will ensure that all Special Education teacher candidates will receive rigorous preparation in the area of reading.

> ***Note:*** *Once the Special Education rules are adopted, the Core Skills test will need to be revised to reflect the new reading standards that have been included.*

Reading-Related Testing Information

Legislative Testing Requirements
Minnesota law sets forth the testing requirements for teacher licensure. The requirements include:
https://www.revisor.mn.gov/statutes/?id=122A.09

1. Basic skills in reading, writing and mathematics
2. General pedagogical knowledge
3. Content-specific knowledge

Additionally, the 2009 Minnesota Legislature enacted language requiring:

> … candidates for initial licenses to teach prekindergarten or elementary students to successfully complete, as part of the examination of licensure-specific teaching skills, test items assessing the candidates' knowledge, skill and ability in comprehensive, scientifically based reading instruction under section 122A.06, subdivision 4 and their knowledge and understanding of the foundations of reading development, the development of reading comprehension and reading assessment and instruction and their ability to integrate that knowledge and understanding.

MTLE Background Information
As of September 2010, the Minnesota Teacher Licensure Examinations (MTLE) is the testing program in Minnesota. The MTLE tests were developed to align specifically and solely to our Minnesota teacher licensure standards and are criterion referenced. Criterion-referenced tests are designed to measure a candidate's knowledge and skills in relation to an established standard of performance (a criterion) rather than in relation to the performance of other candidates. The tests are designed to help identify those candidates who have the level of knowledge and skills required to perform satisfactorily as educators.

The MTLE are delivered as computer-based tests, with the exception of World Language and Culture tests, which are paper-based. The MTLE for each licensure field includes multiple subtests, each with its own passing score. The subtest model was developed to ensure greater accountability for content knowledge and skill. In the former testing system candidates took one test that covered all of the test objectives; this left open the possibility for candidates to perform very well in some areas of the test and compensate for low performance in other areas. The subtest model substantially reduces this possibility, as candidates are held to passing score requirements for multiple subtests. Additionally, within each subtest, subareas provide further detail about the specific content that is tested.

Specific to the legislative mandate to test reading knowledge and skills for candidates to teach prekindergarten or elementary students, the MTLE tests were built to ensure competence in reading.

- **Early Childhood:** In addition to the required Basic Skills and Pedagogy tests, candidates for Early Childhood licensure must pass two content-specific subtests. The reading competencies are in Subtest 1 and they account for 75 percent of the test items. As such, in order to pass the subtest, a candidate must perform well on the test items relating to this body of knowledge.
- **Elementary Education:** In addition to the required Basic Skills and Pedagogy tests, candidates for Elementary Education licensure must pass three content-specific subtests. The reading competencies are in Subtest 1 and they account for 78 percent of the test items. As such, in order to pass the subtest, a candidate must perform well on the test items relating to this body of knowledge.

MTLE Data Provided

This report provides data and information for all licensure fields with reading-specific test items, clustered as follows:

- Early Childhood and Elementary Education
- Content-Specific Licensure Fields
- Reading Endorsements

*** Important Notes and Cautions about the Data: ***

1. Candidates who attempted the MTLE on or after September 1, 2010, until November 1, 2011, were included in the data table. Only the best attempt for candidates is being evaluated. That is, if a candidate were to fail a test then retake the test, he or she would only be counted once.
2. Given that the MTLE series has only been available since September 2010, many subtests still have a low volume of test-takers. As such, it is more difficult to make judgments about the performance of a test. Aggregate results are provided only for subtests with 10 or more examinees. Subtests with fewer than 10 examinees will display as "Low N."
3. The testing data includes all individuals taking the MTLE, including candidates who were prepared in Minnesota approved licensure programs and also applicants from outside Minnesota holding a license from another state.

Interpreting the Data Tables

Two tables are provided for each test field with reading-specific test items. The first table provides a breakdown of the subtests by subarea; the shaded rows indicate where reading test items are found. For Early Childhood and Elementary Education an additional chart is provided to show the breakdown of Subtest 1, where reading is tested. The second table provides a summary of candidate performance between September 1, 2010, through November 1, 2011, on the required subtests for each test field. Following the tables, the reading-specific test objectives are provided.

> *Note: Minnesota has historically not had a specific test required for Adult Basic Education. Reading Leader is a new licensure field and does not yet have a test developed.*

Shading: Shaded rows indicate that the particular subtest and subarea where reading test items are found.

Subtest: Subtest name, subtest number and date range. The example, "Early Childhood Ed Sub 1 (08/10-Present)" indicates that the data table represents candidate data for the Early Childhood Education Subtest 1 exam for all test takers who attempted the exam from September 2010, through November 1, 2011.

 # Takers: Number of examinees taking a test/subtest. Note: all data represents a candidate's best attempt. That is, if a candidate were to fail a test then retake the test, he or she would only be counted once.

Subarea: A test is categorized by subareas based on content. All exams in this report have either two or three subareas.

Subarea Type: M/C – Multiple Choice   C/R – Constructed Response

Subarea Name: Name given to designated subarea to further describe the content tested.

Mean Subarea Perf. Index: Mean Subarea Performance Index. Performance indices are provided on a scale of 1-4 and can be interpreted as follows:

++++   Candidate answered <u>most </u>of the items correctly.

+++   Candidate answered <u>many</u> of the items correctly.

++   Candidate answered <u>some</u> of the items correctly.

+   Candidate answered <u>few or none</u> of the items correctly.

In general, a strong performance on the MTLE will result in a three or a four while a weak performance would result in a two or a one.

 # Pass: Number of examinees with Pass status

 # Not Pass: Number of examinees with Not Pass status
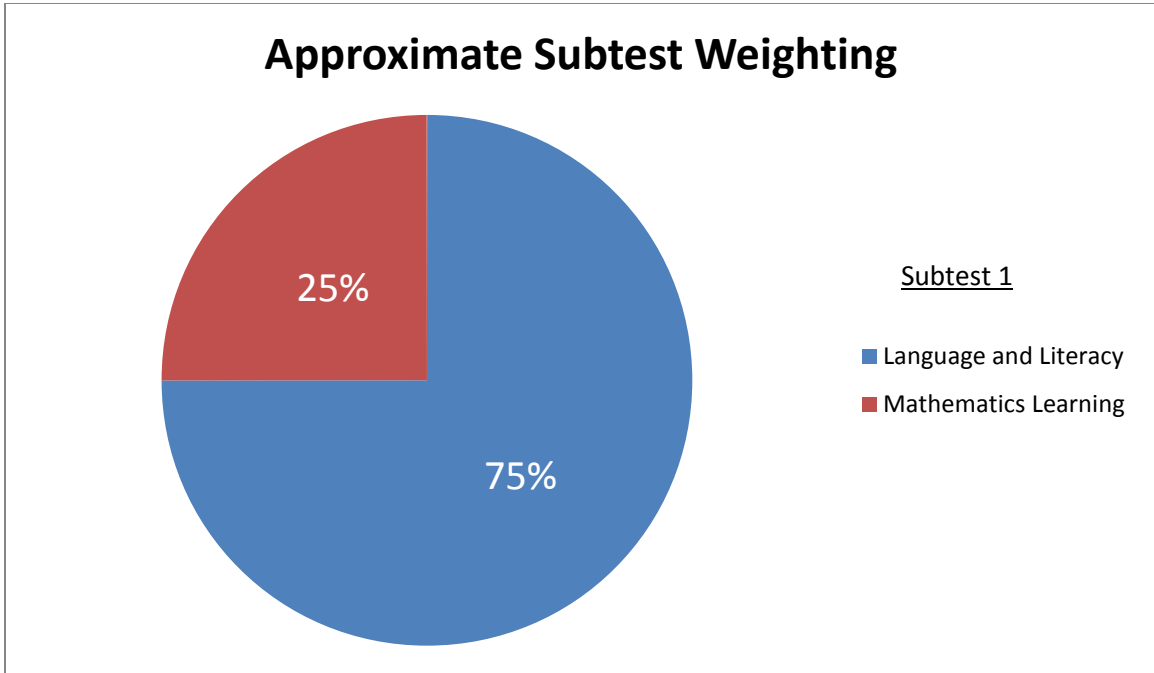
% Pass: Percent of examinees with Pass status

% Not Pass: Percent of examinees with Not Pass status

Mean Total Scaled Score: All MTLE subtests are scored on a scaled system, which provides a common range of possible scores and a common passing score. Specifically, for all MTLE subtests, candidates can earn scores between 100-300 and the passing score for any subtest is always 240. This type of a scaled system is a benefit to candidates, faculty members and Licensing staff in terms of reduced confusion and margin of error in looking at scores and score reports.

However, a scaled scoring system also requires some explanation. A passing score of 240 does not mean that a candidate scored 80 percent of the items correctly. All of the subtests went through a rigorous process in June of 2010, where panels of content-specific Minnesota teachers and faculty members went through the item banks and made two rounds of independent judgments about the level of difficulty and expected performance for each item. These judgments were compiled and by using well-established psychometric processes, provided recommended passing scores for each subtest. In some cases, these panel-based recommendations translated into a passing score roughly equal to answering 30 out of 40 scoreable items correct; in other cases, the panel-based recommendations reflected a far lower number, even as low as answering 17 out of 40 scoreable items correct.

Testing Data

Early Childhood Education (Birth to Grade 3)

Approximate Subtest Weighting

25% Mathematics Learning

75% Language and Literacy

Subtest 1
- Language and Literacy
- Mathematics Learning

Teachers of Early Childhood Education					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Early Childhood Ed Sub 1 (08/10-Present)	257	01	M/C	Language and Literacy	3.3
Early Childhood Ed Sub 1 (08/10-Present)	257	02	M/C	Mathematics Learning	3.4
Early Childhood Ed Sub 2 (08/10-Present)	257	01	M/C	Development of Children Age 0-5 Years	3.1
Early Childhood Ed Sub 2 (08/10-Present)	257	02	M/C	Learning in the Content Areas	3.2

Teachers of Early Childhood Education					
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Early Childhood Ed Sub 1 (08/10-Present)	257	246	11	95.72%	4.28%	265.2
Early Childhood Ed Sub 2 (08/10-Present)	257	237	20	92.22%	7.78%	257.6

Subtest 1, Subarea I: Language and Literacy

Understand oral language foundations of literacy development in English, including phonological and phonemic awareness.

- demonstrating knowledge of the interdependent nature of reading, writing, listening and speaking; and knowledge of strategies for promoting infants', toddlers' and preprimary- and school-age children's oral language development (e.g., receptive and expressive oral vocabulary, listening comprehension skills) to support their literacy development
- applying knowledge of strategies for promoting literacy in the home, including providing encouragement to and support for parents or guardians to read to their children, in English or in the home languages of English language learners
- demonstrating knowledge of how to use children's interests, reading abilities and backgrounds as foundations for the reading program (e.g., by encouraging children's use and construction of literacy skills through incorporating their interests and providing them with authentic reasons to read and write)
- demonstrating knowledge of phonological awareness and explicit, research-based instruction in phonological awareness skills (e.g., detecting and identifying the boundaries of words; syllables; onset/rime)
- demonstrating knowledge of phonemic awareness and explicit, research-based, systematic instruction in phonemic awareness skills (e.g., recognizing that words are made up of separate phonemes; distinguishing initial, medial and final phonemes; orally blending, segmenting, deleting and substituting phonemes)
- applying knowledge of the use of appropriate materials (e.g., materials that match reading levels, interests, cultural and linguistic backgrounds) and effective, engaging oral language and writing activities to reinforce students' development in oral language, phonological awareness and phonemic awareness and to help them make connections between oral language and reading and writing
- demonstrating knowledge of formal and informal methods for assessing students' development in oral language, phonological awareness and phonemic awareness and knowledge of how to interpret and use the results of such assessments to plan effective instruction in these areas
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in oral language, phonological awareness and phonemic awareness

Understand the development of concepts of print, letter recognition, letter formation and letter-sound correspondence.

- demonstrating knowledge of basic concepts of print and strategies for promoting students' development of concepts of print
- demonstrating knowledge of the development of uppercase and lowercase letter-recognition and letter-formation skills and explicit, research-based instruction in letter recognition and letter formation
- demonstrating knowledge of the alphabetic principle and the nature of letter-sound relationships in English and explicit, research-based instruction in letter-sound correspondence
- applying knowledge of the use of appropriate materials and effective, engaging oral language and writing activities and multisensory techniques to reinforce students' development of concepts of print, uppercase and lowercase letter recognition and formation and letter-sound correspondence

- demonstrating knowledge of formal and informal methods for assessing development in concepts of print, letter recognition, letter formation and letter-sound correspondence (including automaticity of letter-sound correspondences) and of how to interpret and use the results of such assessments to plan effective instruction in these areas
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in concepts of print, letter recognition, letter formation and letter-sound correspondence
- demonstrating knowledge of basic ways in which the writing systems of other languages may differ from English and the importance of helping English language learners transfer literacy skills from their home language to English

Understand the development of phonics and other word-identification strategies, spelling and fluency.

- demonstrating knowledge of basic concepts related to beginning literacy development (e.g., relationships between beginning stages of reading, writing and spelling; reciprocity between decoding and encoding) and knowledge of strategies for communicating with children's adult caregivers about concepts of language and literacy development and age-appropriate learning materials
- demonstrating knowledge of basic terminology used to describe common letter combinations and/or letter-sound relationships in English (e.g., single vowels, single consonants, consonant digraphs, consonant blends, vowel digraphs, diphthongs, *r*-controlled and *l*-controlled vowels)
- applying knowledge of research-based, systematic phonics instruction at beginning stages of literacy development to promote students' accurate decoding and spelling of regular words of increasing complexity (e.g., VC, CVC, CVCC, CCVC, CVVC, CVCe)
- applying knowledge of research-based, systematic instruction in sight words, common inflectional morphemes (e.g., *-ed*, *-er*, *-est*, *-ing*, *-s*) and orthographic guidelines (e.g., when to change *y* to *i*) to promote students' accurate decoding and spelling of irregular and/or inflected words
- applying knowledge of research-based, explicit instruction in syllable patterns (e.g., open, closed), syllabication rules and guidelines (e.g., VC/CV, V/CV) and structural analysis skills (e.g., recognizing word roots, derivational affixes and compound words) to promote students' accurate decoding and spelling of multi-syllable words
- demonstrating knowledge of the key indicators of reading fluency (i.e., accuracy, rate and prosody), common factors that disrupt fluency (e.g., weak decoding skills, lack of automatic word recognition, gaps in vocabulary or syntactic knowledge) and research-based, explicit instruction to promote fluency
- applying knowledge of the use of appropriate texts (e.g., decodable texts for students whose decoding is not automatic) and effective, engaging reading and writing activities to reinforce students' phonics and other word-identification strategies, spelling and fluency
- demonstrating knowledge of formal and informal methods for assessing students' development in phonics and other word-identification strategies, spelling and fluency and knowledge of how to interpret and use the results of such assessments to plan effective instruction in these areas
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in phonics and other word-identification strategies, spelling and fluency

Understand vocabulary development and reading comprehension.

- demonstrating knowledge of different levels of reading comprehension (i.e., literal, inferential and evaluative), how proficient readers read and key factors that affect reading comprehension (e.g., automatic decoding, fluency, vocabulary knowledge, knowledge of academic language structures, background knowledge, use of comprehension strategies)
- demonstrating knowledge of the critical role vocabulary plays in reading and the importance of engaging students in early and continual language experiences to promote their vocabulary development
- applying knowledge of components of effective, research-based vocabulary instruction (e.g., explicitly teaching words and their meanings, word-learning strategies such as structural analysis [including teaching the meanings of specific affixes and roots] and strategies for verifying the meaning and pronunciation of unfamiliar or multiple-meaning words; promoting word consciousness and a love of words; encouraging and supporting wide reading; providing meaningful exposure to and opportunities to use new vocabulary) and criteria for selecting words for vocabulary instruction
- applying knowledge of research-based, explicit instruction in comprehension strategies (e.g., prediction, prior knowledge, monitoring, think-aloud, text structure, visual representation, mental imagery, summarization, questions/questioning) that students can use to enhance their own comprehension of texts and promote their independence and self-efficacy as readers
- applying knowledge of the use of appropriate texts and effective, engaging oral language, reading and writing activities to reinforce students' vocabulary development; to facilitate their comprehension and analysis of texts before, during and after reading; and to reinforce their development and use of comprehension strategies
- demonstrating knowledge of the role of independent reading in literacy development and of implicit and explicit strategies for promoting students' extensive independent reading (e.g., by making available a variety of reading materials, guiding students in selecting independent reading materials, providing daily opportunities for self-selected reading and for sharing what is read, reading aloud regularly) to consolidate their reading competence and promote personal growth and lifelong learning
- demonstrating knowledge of formal and informal methods for assessing students' development in vocabulary and comprehension and for determining students' independent, instructional and frustration reading levels; and demonstrating knowledge of how to interpret and use the results of these assessments to plan effective vocabulary and comprehension instruction and to guide students' independent reading
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in vocabulary development, reading comprehension, comprehension strategies and independent reading

Understand different types of texts and strategies for reading them.

- demonstrating knowledge of children's literature representing a variety of genres, including key characteristics and elements of literary/narrative texts (e.g., story elements such as character and plot, poetic elements such as rhythm and rhyme, stylistic elements such as similes and metaphors); and demonstrating knowledge of explicit instruction in key features, genres and elements of grade-level-appropriate literary/narrative texts
- applying knowledge of explicit instruction in literary response and analysis skills (e.g., using details from a text to support responses, analyzing story elements, interpreting figurative language, recognizing that texts can reflect diverse cultural perspectives)
- applying knowledge of the use of appropriate texts from a range of genres, eras, perspectives and cultures and the use of effective, engaging oral language, reading and writing activities to

reinforce students' comprehension of literary/narrative texts and their development in literary response and analysis

- recognizing key features of different types of informational texts and applying knowledge of the use of appropriate texts and effective, engaging oral language, reading and writing activities to promote students' emerging ability to comprehend informational texts and read for different purposes
- demonstrating knowledge of formal and informal methods for assessing students' understanding and analysis of literary and informational texts and knowledge of how to interpret and use the results of such assessments to plan effective instruction in literary response and analysis and content-area literacy skills
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in literary response and analysis and content-area literacy skills

Understand English language conventions and structures, academic language development and the development of writing.

- demonstrating basic knowledge of English conventions and the structure of the English language (i.e., sentence structure, grammar, punctuation, capitalization, spelling, syntax and semantics) and knowledge of strategies for helping students understand similarities and differences between language structures used in spoken English and those used in written English
- applying knowledge of strategies for helping students interpret and apply vocabulary and English grammar and language conventions in authentic reading, writing, listening and speaking contexts
- applying knowledge of strategies for developing students' ability to use visual and written language to communicate with a variety of audiences for different purposes
- demonstrating knowledge of how to provide explicit instruction and guided practice in written-language structures using a range of approaches and activities to develop students' facility in comprehending and using academic language and in reading and writing across the curriculum
- demonstrating knowledge of formal and informal methods for assessing students' development of written language and use of written English language structures and conventions and knowledge of how to interpret such assessments to plan writing instruction
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling writers through highly proficient writers) in the development of written language

Elementary Education (Grades K–6)
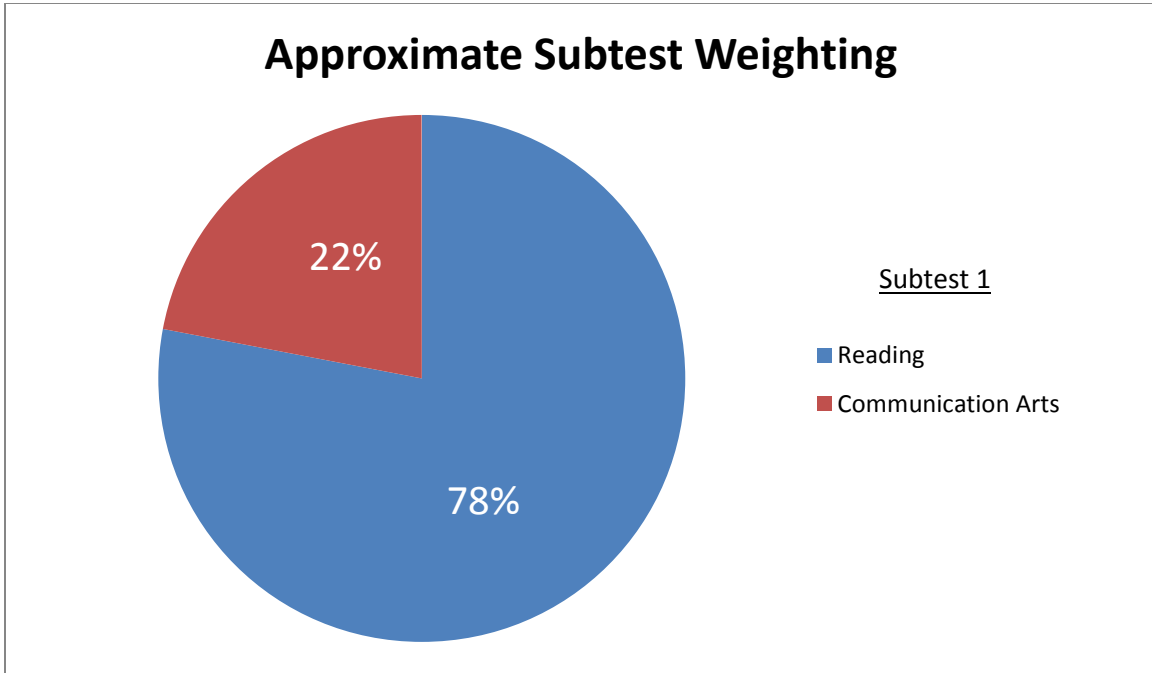
Approximate Subtest Weighting

Subtest 1
- ■ Reading
- ■ Communication Arts

78%

22%

Teachers of Elementary Education					
Subtest	**# Takers**	**Subarea #**	**Subarea Type**	**Subarea Name**	**Mean Subarea Perf. Index**
Elementary Ed Sub 1 (08/10-Present)	1334	01	M/C	Reading	3.0
Elementary Ed Sub 1 (08/10-Present)	1334	02	M/C	Communication Arts	3.6
Elementary Ed Sub 2 (08/10-Present)	1325	01	M/C	Mathematics	3.1
Elementary Ed Sub 2 (08/10-Present)	1325	02	M/C	Health/Fitness and Fine Arts	3.4
Elementary Ed Sub 3 (08/10-Present)	1319	01	M/C	Science	2.8
Elementary Ed Sub 3 (08/10-Present)	1319	02	M/C	Social Studies	2.7

Teachers of Elementary Education						
Subtest	**# Takers**	**# Pass**	**# Not Pass**	**% Pass**	**% Not Pass**	**Mean Total Scaled Score**
Elementary Ed Sub 1 (08/10-Present)	1,334	1234	100	92.50%	7.50%	260.5
Elementary Ed Sub 2 (08/10-Present)	1,325	1184	141	89.36%	10.64%	261.4
Elementary Ed Sub 3 (08/10-Present)	1,319	938	381	71.11%	28.89%	247.9

Subtest 1, Subarea I: Reading

Understand oral language foundations of literacy development in English, including phonological and phonemic awareness.

- demonstrating knowledge of developmental stages of language, including interrelationships between oral language development and literacy development and applying knowledge of strategies for promoting students' oral language development (e.g., oral vocabulary, listening comprehension skills) to support their literacy development
- demonstrating knowledge of phonological awareness and research-based, explicit instruction in phonological awareness skills (e.g., detecting and identifying word boundaries, syllables, rhyming words, onset/rime)
- demonstrating knowledge of phonemic awareness and research-based, explicit instruction in phonemic awareness skills (e.g., recognizing that words are made up of separate phonemes; distinguishing initial, medial and final phonemes; orally blending, segmenting, deleting and substituting phonemes)
- applying knowledge of the use of appropriate materials and effective, engaging oral language and writing activities to motivate and reinforce students' development in oral language, phonological awareness and phonemic awareness and to help them make connections between oral language and reading and writing
- demonstrating knowledge of formal and informal methods for assessing students' development in oral language, phonological awareness and phonemic awareness and demonstrating ability to interpret and use the results of these assessments to plan effective instruction in these areas
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in oral language, phonological awareness and phonemic awareness, including recognizing when English phonemes differ from those of other languages and need to be taught explicitly

Understand the development of concepts of print, letter recognition, letter formation and letter-sound correspondence.

- demonstrating knowledge of basic concepts of print and strategies for promoting students' development of concepts of print
- demonstrating knowledge of the development of uppercase and lowercase letter recognition and letter formation skills and research-based, explicit instruction in letter recognition and letter formation
- demonstrating knowledge of the alphabetic principle and the nature of letter-sound relationships in English and research-based, explicit instruction in letter-sound correspondence
- applying knowledge of the use of appropriate materials; effective, engaging oral language and writing activities; and multisensory techniques to motivate and reinforce students' development of concepts of print, uppercase and lowercase letter recognition and formation and letter-sound correspondence
- demonstrating knowledge of formal and informal methods for assessing students' development in concepts of print, letter recognition, letter formation and letter-sound correspondence and demonstrating ability to interpret and use the results of these assessments to plan effective instruction in these areas
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in concepts of print, letter recognition, letter formation and letter-sound correspondence, including recognizing basic ways in which the

writing systems of other languages may differ from English and the importance of helping English language learners transfer relevant skills from their home language to English

Understand the development of phonics and other word identification strategies, spelling and fluency.

- demonstrating knowledge of basic concepts related to beginning literacy development (e.g., relationships between beginning stages of reading, writing and spelling; reciprocity between decoding and encoding) and basic terminology used to describe common letter combinations and/or letter-sound relationships in English (e.g., consonant digraphs, consonant blends, vowel digraphs, diphthongs, *r-* and *l*-controlled vowels)
- applying knowledge of research-based, explicit phonics instruction to promote students' accurate decoding and spelling of regular words of increasing complexity (e.g., VC, CVC, CVCC, CCVC, CVCe, CVVC)
- applying knowledge of research-based, explicit instruction in sight words, common inflectional morphemes (e.g., *-ed*, *-er*, *-est*, *-ing*, *-s*) and related orthographic guidelines (e.g., doubling the final consonant or changing *y* to *i* when adding an inflection) to promote students' accurate decoding and spelling of irregular and/or inflected words
- applying knowledge of research-based, explicit instruction in regular, open and closed syllable patterns and syllabication guidelines; structural analysis skills (e.g., recognizing word roots, derivational affixes and compound words); and orthographic patterns based on etymology to promote students' accurate decoding and spelling of multi-syllable words
- demonstrating knowledge of key indicators of reading fluency (i.e., accuracy, rate and prosody), common factors that disrupt fluency (e.g., weakness in phonics and other word identification skills, lack of familiarity with academic vocabulary and/or syntactic structures, limited background knowledge) and research-based, explicit instruction to promote fluency at all stages of reading development
- applying knowledge of the use of appropriate texts and effective, engaging reading and writing activities to motivate and reinforce students' development of phonics and other word identification skills, spelling and fluency
- demonstrating knowledge of formal and informal methods for assessing students' development in phonics and other word identification skills, spelling and fluency and demonstrating ability to interpret and use the results of these assessments to plan effective instruction in decoding, spelling and fluency
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in phonics and other word identification skills, spelling and fluency at all stages of literacy development, including recognizing basic ways in which the writing systems of other languages may differ from English and the importance of helping English language learners transfer relevant skills from their home language to English

Understand vocabulary development.

- demonstrating awareness of the critical role vocabulary plays in reading and the importance of engaging students in early and continual language experiences to promote their vocabulary development
- applying knowledge of components of effective vocabulary instruction (e.g., explicitly teaching words and word-learning strategies, promoting word consciousness and a love of words, encouraging and supporting wide reading, providing meaningful exposure to and opportunities to use new vocabulary) and criteria for selecting words for vocabulary instruction
- applying knowledge of research-based, explicit instruction in independent strategies for building vocabulary (e.g., analyzing base morphemes and affixes) and for determining the meaning and

pronunciation of unfamiliar or multiple-meaning words encountered through listening and reading (e.g., using appositives, semantic and syntactic clues, reference materials)

- applying knowledge of research-based, explicit instruction in words and their meanings, including the etymology of words (e.g., common Latin and Greek roots), idiomatic expressions and foreign words and expressions used in English
- applying knowledge of the use of appropriate texts and effective, engaging oral language, reading and writing activities to motivate, augment and reinforce students' development of robust listening, speaking, reading and writing vocabularies
- demonstrating knowledge of formal and informal methods for assessing students' vocabulary development and demonstrating the ability to interpret and use the results of these assessments to plan effective instruction in vocabulary development
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in vocabulary development

Understand reading comprehension and development of comprehension strategies and independent reading.

- demonstrating knowledge of how proficient readers read, different levels of reading comprehension (i.e., literal, inferential and evaluative) and factors that affect reading comprehension (e.g., automatic decoding, fluency, vocabulary knowledge, knowledge of academic language structures, background knowledge, comprehension strategies, linguistic and organizational complexity of text, motivation/purpose for reading)
- applying knowledge of research-based, explicit instruction in comprehension strategies (e.g., prediction, making connections to prior knowledge, think-aloud, monitoring, using knowledge of text structure, visual representation, mental imagery, summarization, questions/questioning) that students can use to enhance their own comprehension of texts and promote their independence and self-efficacy as readers
- applying knowledge of the use of appropriate texts and effective, engaging oral language, reading and writing activities to facilitate students' comprehension of texts before, during and after reading and to motivate and reinforce their development of comprehension strategies
- demonstrating knowledge of the role of independent reading in literacy development and explicit strategies for promoting and motivating students' independent and at-home reading to consolidate and reinforce their reading competence and promote their personal growth and lifelong learning (e.g., applying knowledge of students' interests; reading aloud to students; providing access to a variety of reading materials, including materials in students' home languages; encouraging and providing support for parents/guardians to read to their children)
- demonstrating knowledge of formal and informal methods for assessing students' development in reading comprehension and demonstrating the ability to interpret and use the results of these assessments to plan effective comprehension instruction
- demonstrating knowledge of strategies for determining students' independent, instructional and frustration reading levels and for using this information to help select appropriate texts for instruction and guide students' independent reading
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in reading comprehension, comprehension strategies and independent reading, including helping English language learners transfer relevant skills from their home language to English

Understand different types of texts and strategies for understanding, analyzing and responding to them.

- demonstrating knowledge of children's and young adolescents' literature representing a range of genres, eras, perspectives and cultures, including key characteristics and elements of literary/narrative texts (e.g., story elements such as character and plot, stylistic elements such as figurative language) and applying knowledge of explicit instruction in key features, genres and elements of literary/narrative texts to promote students' understanding of these texts
- applying knowledge of explicit instruction in literary response and analysis skills (e.g., using evidence from a text to support responses, analyzing story elements, interpreting figurative language, evaluating tone and mood, recognizing that texts can reflect diverse cultural perspectives)
- demonstrating knowledge of various types of informational/expository texts, including key textual features (e.g., indexes and headings), graphic features (e.g., charts and diagrams) and organizational structures (e.g., descriptive, chronological, cause/effect, comparison/contrast, problem/solution) of these texts and applying knowledge of explicit instruction in key features and organizational structures of various print and digital informational/expository texts to promote students' understanding of these texts
- applying knowledge of explicit instruction in analysis and response skills for informational/expository texts (e.g., analyzing an author's point of view or argument, evaluating a text with respect to credibility, analyzing a text's internal consistency or logic, paraphrasing information from a text, summarizing a text's main ideas)
- applying knowledge of the use of appropriate texts and effective, engaging oral language, reading and writing activities, including teacher read-a- louds, to motivate and reinforce students' understanding and analysis of and response to various literary/narrative and informational/expository texts
- demonstrating knowledge of formal and informal methods for assessing students' understanding and analysis of and response to literary/narrative and informational/expository texts and demonstrating the ability to interpret and use the results of these assessments to plan effective instruction in literary response and analysis and content-area literacy skills
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling readers through highly proficient readers) in literary response and analysis and content-area literacy skills

Understand academic language development, including English language structures and conventions.

- demonstrating basic knowledge of English language structures and conventions (i.e., sentence structure, grammar, punctuation, capitalization, spelling, syntax and semantics)
- demonstrating knowledge of strategies for enhancing literacy skills by helping students make connections between oral language and reading and writing, including helping them understand similarities and differences between language structures and conventions used in spoken and written English and applying knowledge of strategies and activities for integrating reading and the communication arts
- demonstrating knowledge of how to provide explicit instruction and guided practice in language structures and conventions using a range of approaches and motivating activities to develop students' facility in comprehending and using academic language in spoken and written English
- demonstrating knowledge of the use of appropriate texts and effective, engaging oral language, reading and writing activities to facilitate students' ability to interpret and apply English grammar and language conventions in authentic reading, writing, listening and speaking contexts; and applying strategies for helping students consolidate knowledge of English

grammar to improve their reading fluency and comprehension (e.g., by providing frequent opportunities to listen to, read and reread materials that use academic language)

- demonstrating knowledge of formal and informal methods for assessing students' academic language development and their understanding and use of English language structures and conventions and demonstrating the ability to interpret and use the results of these assessments to plan effective instruction in these areas
- applying knowledge of strategies (e.g., differentiated instruction, interventions, enrichment) to address the assessed needs of individual students (e.g., English language learners, struggling writers through highly proficient writers) in academic language development, including recognizing ways in which language structures and written language conventions of other languages may differ from English and the importance of helping English language learners transfer language skills from their home language to English

Agricultural Education (Grades 5–12)

Agricultural Education					
Subtest	**# Takers**	**Subarea #**	**Subarea Type**	**Subarea Name**	**Mean Subarea Perf. Index**
Ag Education Sub 1 (08/10-Present)	6	**01**	M/C	Plant Science	Low N
Ag Education Sub 1 (08/10-Present)	6	**02**	M/C	Animal Science	Low N
Ag Education Sub 1 (08/10-Present)	6	**03**	M/C	Environmental Science and Natural Resource Management	Low N
Ag Education Sub 2 (08/10-Present)	6	**01**	M/C	Management, Economics, Trade and Marketing	Low N
Ag Education Sub 2 (08/10-Present)	6	**02**	M/C	Agricultural Mechanics, Technology and Food and Fiber Processing	Low N
Ag Education Sub 2 (08/10-Present)	6	**03**	M/C	Career Planning, Student Development and Reading	Low N

Agricultural Education						
Subtest	**# Takers**	**# Pass**	**# Not Pass**	**% Pass**	**% Not Pass**	**Mean Total Scaled Score**
Ag Education Sub 1 (08/10-Present)	6	Low N	Low N	-	-	Low N
Ag Education Sub 2 (08/10-Present)	6	Low N	Low N	-	-	Low N

Subtest 2, Subarea III: Career Planning, Student Development and Reading

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in agriculture.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words

Business (Grades 5–12)

Teachers of Business					
Subtest	**# Takers**	**Subarea #**	**Subarea Type**	**Subarea Name**	**Mean Subarea Perf. Index**
Business Sub 1 (08/10-Present)	36	01	M/C	Business Organization and Management	3.1
Business Sub 1 (08/10-Present)	36	02	M/C	Finance, Accounting and Computation	2.9
Business Sub 1 (08/10-Present)	36	03	M/C	Marketing and Business Law and Ethics	2.7
Business Sub 2 (08/10-Present)	36	01	M/C	Economics and International Business	1.8
Business Sub 2 (08/10-Present)	36	02	M/C	Business Technology and Communications	3.6
Business Sub 2 (08/10-Present)	36	03	M/C	Career Planning, Student Development and Reading	3.2

Teachers of Business					
Subtest	**# Takers**	**# Pass**	**# Not Pass**	**% Pass**	**% Not Pass**	**Mean Total Scaled Score**
Business Sub 1 (08/10-Present)	36	28	8	77.78%	22.22%	249.6
Business Sub 2 (08/10-Present)	36	32	4	88.89%	11.11%	249.7

Subtest 2, Subarea III: Career Planning, Student Development and Reading

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in business.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating the ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of business-specific vocabulary words

Chemistry (Grades 9–12)

Teachers of Chemistry					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Chemistry Sub 1 (08/10-Present)	79	01	M/C	Chemistry Research and Applications	3.7
Chemistry Sub 1 (08/10-Present)	79	02	M/C	Matter and Atomic Structure	3.3
Chemistry Sub 1 (08/10-Present)	79	03	M/C	Stoichiometry	2.7
Chemistry Sub 2 (08/10-Present)	77	01	M/C	Thermodynamics	3.0
Chemistry Sub 2 (08/10-Present)	77	02	M/C	Chemical Bonding	3.4
Chemistry Sub 2 (08/10-Present)	77	03	M/C	Chemical Reactions	3.1

Teachers of Science- Chemistry						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Chemistry Sub 1 (08/10-Present)	79	70	9	88.61%	11.39%	262.6
Chemistry Sub 2 (08/10-Present)	77	69	8	89.61%	10.39%	260.1

Subtest 1, Subarea I: Chemistry Research and Applications

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in chemistry.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating the ability to plan instruction and select strategies that support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with various reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension of content-area texts before, during and after reading and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating knowledge of explicit strategies for developing students' critical literacy skills (e.g., encouraging students to question texts, developing students' ability to analyze texts from multiple viewpoints or perspectives)

- demonstrating the ability to plan instruction and select strategies that support students' reading and understanding of sources of chemistry information (e.g., helping students follow laboratory instructions, understand chemical abbreviations and chemical symbols and interpret diagrams and graphs)

Communication Arts/Literature (Grades 5–12)

Teachers of Communication Arts and Literature					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Comm Arts/Lit Sub 1 (08/10-Present)	293	01	C/R	Media Literacy	3.4
Comm Arts/Lit Sub 1 (08/10-Present)	293	02	M/C	Reading	3.4
Comm Arts/Lit Sub 1 (08/10-Present)	293	03	M/C	Literature	3.1
Comm Arts/Lit Sub 2 (08/10-Present)	292	01	M/C	Listening and Speaking	2.7
Comm Arts/Lit Sub 2 (08/10-Present)	292	02	M/C	Components of Writing	2.5
Comm Arts/Lit Sub 2 (08/10-Present)	292	03	M/C	Modes of Writing	3.2

Teachers of Communications Arts and Literature						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Comm Arts/Lit Sub 1 (08/10-Present)	293	281	12	95.90%	4.10%	265.9
Comm Arts/Lit Sub 2 (08/10-Present)	292	241	51	82.53%	17.47%	251.0

Subtest 1, Subarea II: Reading

Understand the foundations of reading development.

- demonstrating knowledge of phonological awareness skills (e.g., distinguishing word syllables)
- demonstrating knowledge of phonemic awareness skills (e.g., segmenting, blending)
- demonstrating knowledge of the concepts of print and the alphabetic principle
- demonstrating knowledge of the role of phonics in promoting reading comprehension
- demonstrating knowledge of the role of fluency in reading development, the components of fluency and the factors that influence fluency
- demonstrating the ability to differentiate reading instruction to meet the needs of students at various reading proficiency levels and with various linguistic backgrounds
- demonstrating the ability to scaffold reading tasks for students who experience comprehension difficulties

Understand strategies for developing vocabulary knowledge and reading comprehension.

- using knowledge of syntactic rules and word structure and contextual analysis skills to help identify word meanings
- recognizing relationships between words (e.g., synonyms, antonyms) and issues related to word selection (e.g., denotative and connotative meanings)
- recognizing factors that influence vocabulary development (e.g., promoting word consciousness, wide reading)
- recognizing factors that influence reading comprehension (e.g., reader's interest, reading rate)

- recognizing an appropriate reading strategy (e.g., scanning, skimming) to use for a particular text and purpose
- recognizing appropriate research-based reading comprehension strategies to use before, during and after reading (e.g., predicting, self-monitoring/self-questioning and using other metacognitive skills, summarizing)
- recognizing appropriate oral and written language activities to use to enhance reading comprehension (e.g., think-aloud, retelling)
- demonstrating knowledge of literal and inferential reading comprehension skills (e.g., identifying sequence of events in a text, making generalizations from information presented in a text)

Understand strategies for reading informational and persuasive texts.

- recognizing the characteristics of various types of informational texts (e.g., newspapers, textbooks) and persuasive texts (e.g., editorials, propaganda)
- using knowledge of the organizational features and structure of a text to help enhance comprehension of the text
- identifying the main idea, purpose and intended audience of a text
- distinguishing between facts and opinions and between general statements and specific details in a text
- assessing the relevance, importance and sufficiency of evidence, examples and reasons provided to explain a concept or support an argument in a text
- assessing the credibility, objectivity and reliability of various sources used in a text
- analyzing the use of rhetorical devices and techniques in a text (e.g., repetition, exaggeration)

Understand strategies for reading technical and functional texts.

- recognizing the characteristics of various types of technical texts (e.g., warranties, contracts) and functional texts (e.g., timetables, application forms)
- using information presented in technical texts to gain knowledge and develop skills (e.g., learning and exercising consumers' and citizens' rights)
- using information presented in functional texts to confirm facts and perform tasks (e.g., planning travel, applying for a job)
- interpreting graphic features used in technical texts (e.g., schematics, flowcharts) and in functional texts (e.g., keys/legends, diagrams)

Middle Level Communication Arts/Literature (Grades 5–8)

Teachers of Communication Arts and Literature- Middle Level Communication Arts and Literature					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
ML Comm Arts/Lit Sub 1 (08/10-Present)	275	01	M/C	Media Literacy	3.7
ML Comm Arts/Lit Sub 1 (08/10-Present)	275	02	M/C	Reading	2.5
ML Comm Arts/Lit Sub 2 (08/10-Present)	274	01	M/C	Listening and Speaking	3.1
ML Comm Arts/Lit Sub 2 (08/10-Present)	274	02	M/C	Writing	2.9

Teachers of Communication Arts and Literature- Middle Level Communication Arts and Literature						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
ML Comm Arts/Lit Sub 1 (08/10-Present)	275	243	32	88.36%	11.64%	251.4
ML Comm Arts/Lit Sub 2 (08/10-Present)	274	245	29	89.42%	10.58%	255.7

Subtest 1, Subarea II Reading

Understand the foundations of reading development.

- demonstrating knowledge of phonological awareness skills (e.g., distinguishing word syllables)
- demonstrating knowledge of phonemic awareness skills (e.g., segmenting, blending)
- demonstrating knowledge of the concepts of print and the alphabetic principle
- demonstrating knowledge of the role of phonics in promoting reading comprehension
- demonstrating knowledge of the role of fluency in reading development, the components of fluency and the factors that influence fluency
- demonstrating the ability to differentiate reading instruction and materials selection to meet the needs of students at various reading proficiency levels and with various linguistic and cultural backgrounds
- demonstrating the ability to scaffold reading tasks for students who experience comprehension difficulties

Understand strategies for developing vocabulary knowledge and reading comprehension.

- using knowledge of syntactic rules and word structure and contextual analysis skills to help identify word meanings
- recognizing relationships between words (e.g., synonyms, antonyms) and issues related to word selection (e.g., denotative and connotative meanings)
- recognizing factors that influence vocabulary development (e.g., promoting word consciousness, wide reading)
- recognizing factors that influence reading comprehension (e.g., reader's interest, reading rate)
- recognizing an appropriate reading strategy (e.g., scanning, skimming) to use for a particular text and purpose

- recognizing appropriate research-based reading comprehension strategies to use before, during and after reading (e.g., predicting, self-monitoring/self-questioning and using other metacognitive skills, summarizing)
- recognizing appropriate oral and written language activities to use to enhance reading comprehension (e.g., think-aloud, retelling)
- demonstrating knowledge of literal and inferential reading comprehension skills (e.g., identifying sequence of events in a text, making generalizations from information presented in a text)

Understand strategies for reading nonliterary texts.

- recognizing the characteristics of various types of nonliterary texts (e.g., newspapers, textbooks, editorials, contracts)
- using knowledge of the organizational features and structure of a nonliterary text to help enhance comprehension of the text
- identifying the main idea, purpose and intended audience of a nonliterary text
- using information presented in nonliterary texts to confirm facts, gain knowledge, develop skills and perform tasks
- distinguishing between facts and opinions and between general statements and specific details in a nonliterary text
- assessing the relevance, importance and sufficiency of evidence, examples and reasons provided to explain a concept or support an argument in a nonliterary text
- assessing the credibility, objectivity and reliability of various sources used in a nonliterary text
- analyzing the use of rhetorical devices and techniques in a nonliterary text (e.g., repetition, exaggeration)
- interpreting graphic features used in nonliterary texts (e.g., photographs, illustrations, maps, graphs, diagrams)

Understand strategies for reading literary texts.

- recognizing the characteristics of various literary genres (e.g., poetry, fiction, nonfiction, drama) and subgenres (e.g., sonnet, short story, mystery, fantasy, biography, essay, epic, tragedy)
- analyzing the structural elements of a literary text (e.g., rhyme, meter, exposition, climax)
- analyzing the development of plot in a literary text (e.g., through flashback, foreshadowing, dialogue)
- analyzing the development of setting in a literary text (e.g., through geographic place, physical surroundings, weather and climate, time of day or year, historical period)
- analyzing the development of characters in a literary text (e.g., through thoughts, feelings, words, actions)
- analyzing the use of various literary and rhetorical devices and techniques in a literary text (e.g., metaphor, imagery, alliteration)
- analyzing the diction or choice of words in a literary text

- interpreting the point of view, tone and mood in a literary text using text-centered and reader-centered approaches
- interpreting central ideas or themes in a literary text using text-centered and reader-centered approaches

Understand strategies for reading in multiple subject areas.

- analyzing concepts, themes and vocabulary that recur in multiple subject areas
- examining how the same vocabulary is used in multiple subject areas in various contexts to denote and connote similar and different meanings
- examining how similes, metaphors and analogies are used to compare and contrast concepts and themes in texts from multiple subject areas
- examining how familiar concepts and themes from one subject area are used to enhance comprehension of unfamiliar concepts and themes from other subject areas
- examining how familiar organizational structures and stylistic features of texts from one subject area are used to enhance comprehension of texts from other subject areas

Earth and Space Science (Grades 9–12)

Teachers of Science- Earth and Space Science					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Earth Space Science Sub 1 (08/10-Present)	27	01	M/C	Concepts and Applications in Earth and Space Science	2.5
Earth Space Science Sub 1 (08/10-Present)	27	02	M/C	Earth Systems	2.2
Earth Space Science Sub 2 (08/10-Present)	27	01	M/C	Origin and Evolution of the Universe and Solar System	2.2
Earth Space Science Sub 2 (08/10-Present)	27	02	M/C	Human Interactions with Earth Systems	2.6

Teachers of Science- Earth and Space Science					
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Earth Space Science Sub 1 (08/10-Present)	27	13	14	48.15%	51.85%	229.1
Earth Space Science Sub 2 (08/10-Present)	27	12	15	44.44%	55.56%	228.0

Subtest 1, Subarea I: Concepts & Applications in Earth & Space Science

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in Earth and space science.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating knowledge of explicit strategies for developing students' critical literacy skills (e.g., encouraging students to question texts, developing students' ability to analyze texts from multiple viewpoints or perspectives)
- demonstrating ability to plan instruction and select strategies that support students' reading and understanding of sources of information in Earth and space science (e.g., helping students follow laboratory instructions and interpret diagrams and graphs)

Family and Consumer Sciences (Grades 5–12)

Teachers of Family and Consumer Sciences					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Fam & Consumer Sci Sub 1 (08/10-Present)	18	01	M/C	Family and Community Relationships	3.5
Fam & Consumer Sci Sub 1 (08/10-Present)	18	02	M/C	Human Development and Parenting	3.5
Fam & Consumer Sci Sub 2 (08/10-Present)	18	01	M/C	Consumer and Family Resources	2.3
Fam & Consumer Sci Sub 2 (08/10-Present)	18	02	M/C	Food Production, Nutrition and Food Safety	2.8
Fam & Consumer Sci Sub 2 (08/10-Present)	18	03	M/C	Career and Professional Development	2.9

Teachers of Family and Consumer Science						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Fam & Consumer Sci Sub 1 (08/10-Present)	18	18	0	100.00%	0.00%	267.8
Fam & Consumer Sci Sub 2 (08/10-Present)	18	14	4	77.78%	22.22%	249.4

Subtest 2, Subarea III: Career and Professional Development

Understand the content and methods for developing students' subject-area reading skills to support their reading and learning in family and consumer sciences.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating the ability to plan instruction and select strategies to support all students' subject-area reading (e.g., differentiating instruction to meet the needs of students with various reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension of subject-area texts before, during and after reading and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating knowledge of explicit strategies for developing students' critical literacy skills (e.g., encouraging students to question texts, developing students' ability to analyze texts from multiple viewpoints or perspectives)

- demonstrating the ability to plan instruction and select strategies that support students' reading and understanding of family and consumer sciences resources (e.g., developing students' ability to follow steps; developing students' ability to explain diagrams, graphs and meanings of abbreviations and symbols)

Health (Grades 5–12)

Teachers of Health					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Health Sub 1 (08/10-Present)	122	01	C/R	Health Promotion and Risk Reduction	3.4
Health Sub 1 (08/10-Present)	122	02	M/C	Physical Health	3.5
Health Sub 2 (08/10-Present)	121	01	M/C	Mental, Social and Family Health	3.8
Health Sub 2 (08/10-Present)	121	02	M/C	Health Advocacy and Literacy	3.5
Health Sub 2 (08/10-Present)	121	03	M/C	School, Community and Environmental Health	3.0

Teachers of Health					
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Health Sub 1 (08/10-Present)	122	122	0	100.00%	0.00%	268.4
Health Sub 2 (08/10-Present)	121	121	0	100.00%	0.00%	267.0

Subtest 2, Subarea II: Health Advocacy and Literacy

Understand the content and methods for developing subject-area reading skills to support students' reading and learning in health education.

- demonstrating knowledge of key components and processes involved in reading and reading comprehension (e.g., print processing abilities, including decoding skills; motivation; background and discourse knowledge; how a reader's interest influences comprehension)
- applying knowledge of how to use a wide range of instructional practices, approaches, methods and curriculum materials, including electronic resources, to support subject-area reading and writing (e.g., familiarizing students with organizational structures used in print and digital texts)
- recognizing the complexities involved in the development of academic language and strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific content words
- applying knowledge of strategies for facilitating students' comprehension of subject-area texts before, during and after reading in order to develop students' reading and metacognitive abilities
- applying knowledge of how to develop students' critical literacy skills by encouraging them to question texts and analyze texts from multiple viewpoints or perspectives
- identifying principles, practices and methods for matching subject-area reading materials, both print and digital, to the cognitive levels of readers in order to support their developmental, cultural and linguistic differences (e.g., differentiating instruction to meet the needs of students with various reading proficiency levels and linguistic backgrounds)

Library Media Specialist (Grades K–12)

Library Media Specialists					
Subtest	**# Takers**	**Subarea #**	**Subarea Type**	**Subarea Name**	**Mean Subarea Perf. Index**
Library Media Spec Sub 1 (08/10-Present)	24	01	M/C	The Information Media Program	3.5
Library Media Spec Sub 1 (08/10-Present)	24	02	M/C	Curriculum and Resources	2.9
Library Media Spec Sub 2 (08/10-Present)	23	01	M/C	Information and Technology Literacy Skills	3.3
Library Media Spec Sub 2 (08/10-Present)	23	02	M/C	Program Administration	3.4

Library Media Specialists						
Subtest	**# Takers**	**# Pass**	**# Not Pass**	**% Pass**	**% Not Pass**	**Mean Total Scaled Score**
Library Media Spec Sub 1 (08/10-Present)	24	24	0	100.00%	0.00%	260.5
Library Media Spec Sub 2 (08/10-Present)	23	23	0	100.00%	0.00%	262.5

Subtest 2, Subarea I: Information and Technology Literacy Skills

Understand the content and methods for developing students' reading skills to support their information and technology literacy skills.

- demonstrating knowledge of key components and processes involved in reading, including vocabulary knowledge, background knowledge, knowledge of academic discourse, print processing abilities and the use of cognitive and metacognitive skills and strategies
- demonstrating knowledge of how to plan instruction and select strategies to support all students' content-area reading, including differentiating instruction, identifying and addressing gaps in students' background knowledge and scaffolding reading tasks for students who experience comprehension difficulties
- demonstrating knowledge of strategies for providing explicit instruction to facilitate students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of strategies for providing explicit instruction to promote students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating knowledge of strategies for providing explicit instruction to develop students' critical literacy skills
- applying knowledge of strategies for assisting students in the selection of reading materials, including literature and other resources, that are appropriate for their reading levels and interests and that promote literacy development
- demonstrating knowledge of strategies for creating and maintaining motivating environments that promote ongoing student engagement and literacy development for all students

- recognizing the importance of displaying positive dispositions towards the act of reading and of maintaining current, research-based knowledge of content-area literacy

Life Science (Grades 9–12)

Teachers of Science- Life Science					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Life Science Sub 1 (08/10-Present)	125	01	M/C	Life Science Research and Applications	3.4
Life Science Sub 1 (08/10-Present)	125	02	M/C	Molecular and Cellular Life Processes	2.8
Life Science Sub 1 (08/10-Present)	125	03	M/C	Molecular Reproduction and Heredity	2.8
Life Science Sub 2 (08/10-Present)	123	01	M/C	Structural and Functional Relationships	2.8
Life Science Sub 2 (08/10-Present)	123	02	M/C	Diversity and Biological Evolution	2.4
Life Science Sub 2 (08/10-Present)	123	03	M/C	Interdependence and Behavior of Organisms	2.7

Teachers of Science- Life Science						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Life Science Sub 1 (08/10-Present)	125	103	22	82.40%	17.60%	252.6
Life Science Sub 2 (08/10-Present)	123	86	37	69.92%	30.08%	244.9

Subtest 1, Subarea I: Life Science Research and Applications

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in life science.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating ability to plan instruction and select strategies that support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting students' use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating knowledge of explicit strategies for developing students' critical literacy skills (e.g., encouraging students to question texts, developing students' ability to analyze texts from multiple viewpoints or perspectives)

- demonstrating ability to plan instruction and select strategies that support students' reading and understanding of life science texts (e.g., helping students to relate what is read to relevant prior knowledge, to follow laboratory activity instructions and to interpret diagrams and graphs in terms of scientific content or meaning)

Mathematics (Grades 5–12)

Teachers of Mathematics- Mathematics					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Mathematics Sub 1 (08/10-Present)	177	01	M/C	Number Sense	2.9
Mathematics Sub 1 (08/10-Present)	177	02	M/C	Functions, Algebra and Calculus	2.6
Mathematics Sub 2 (08/10-Present)	176	01	M/C	Measurement and Geometry	2.8
Mathematics Sub 2 (08/10-Present)	176	02	M/C	Data, Probability and Discrete Math	2.7
Mathematics Sub 2 (08/10-Present)	176	03	M/C	Mathematical Processes	2.9

Teachers of Mathematics- Mathematics					
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Mathematics Sub 1 (08/10-Present)	177	125	52	70.62%	29.38%	244.1
Mathematics Sub 2 (08/10-Present)	176	133	43	75.57%	24.43%	248.0

Subtest 2, Subarea III: Mathematical Processes

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in mathematics.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating ability to plan instruction and select strategies that support students' reading and understanding of mathematics texts (e.g., asking students to translate between different mathematical representations, asking students to describe in words or sentences the relationship between symbols and the situation being modeled, matching mathematical representations to differences in learning styles)

Middle Level Mathematics (Grades 5–8)

Teachers of Mathematics- Middle Level Mathematics					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
ML Math Sub 1 (08/10-Present)	203	01	M/C	Number Sense	1.7
ML Math Sub 1 (08/10-Present)	203	02	M/C	Patterns, Relations and Functions	1.6
ML Math Sub 2 (08/10-Present)	199	01	M/C	Shape and Space	2.0
ML Math Sub 2 (08/10-Present)	199	02	M/C	Data, Randomness and Uncertainty	1.9
ML Math Sub 2 (08/10-Present)	199	03	M/C	Discrete Mathematics and Reading	2.1

Teachers of Mathematics- Middle Level Mathematics					
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
ML Math Sub 1 (08/10-Present)	203	42	161	20.69%	79.31%	200.1
ML Math Sub 2 (08/10-Present)	199	63	136	31.66%	68.34%	216.9

Subtest 2, Subarea III: Discrete Mathematics and Reading

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in middle level mathematics.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating ability to plan instruction and select strategies that support students' reading and understanding of middle level mathematics texts (e.g., asking students to translate between different mathematical representations, asking students to describe in words or sentences the relationship between symbols and the situation being modeled, matching mathematical representations to differences in learning styles)

Middle Level Science (Grades 5–8)

Teachers of Science- Middle Level Science					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
ML Science Sub 1 (08/10-Present)	239	01	M/C	Concepts and Applications in Middle Level General Science	3.6
ML Science Sub 1 (08/10-Present)	239	02	M/C	Earth and Space Systems	2.8
ML Science Sub 2 (08/10-Present)	237	01	M/C	Life Science	3.0
ML Science Sub 2 (08/10-Present)	237	02	M/C	Physical Science	2.9

Teachers of Science- Middle Level Science					
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
ML Science Sub 1 (08/10-Present)	239	211	28	88.28%	11.72%	260.3
ML Science Sub 2 (08/10-Present)	237	179	58	75.53%	24.47%	251.9

Subtest 1, Subarea I: Concepts and Applications in Middle Level General Science

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in the sciences.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating the ability to plan instruction and select strategies that support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating knowledge of explicit strategies for developing students' critical literacy skills (e.g., encouraging students to question texts, developing students' ability to analyze texts from multiple viewpoints or perspectives)
- demonstrating the ability to plan instruction and select strategies that support students' reading and understanding of sources of information in the sciences (e.g., helping students follow laboratory instructions and interpret diagrams and graphs)

Physics (Grades 9–12)

Teachers of Science- Physics					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Physics Sub 1 (08/10-Present)	42	01	M/C	Concepts in Physics	2.7
Physics Sub 1 (08/10-Present)	42	02	M/C	Linear and Rotational Motion	1.9
Physics Sub 1 (08/10-Present)	42	03	M/C	Simple Harmonic and Wave Motion	2.0
Physics Sub 2 (08/10-Present)	41	01	M/C	Electricity and Magnetism	1.8
Physics Sub 2 (08/10-Present)	41	02	M/C	Geometrical and Physical Optics	2.3
Physics Sub 2 (08/10-Present)	41	03	M/C	Kinetic Theory and Contemporary Physics	2.5

Teachers of Science- Physics						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Physics Sub 1 (08/10-Present)	42	16	26	38.10%	61.90%	226.2
Physics Sub 2 (08/10-Present)	41	15	26	36.59%	63.41%	225.4

Subtest 1, Subarea I: Concepts in Physics
Understand the content and methods for developing students' content-area reading skills to support their reading and learning in physics.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating the ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of physics vocabulary words
- demonstrating knowledge of explicit strategies for developing students' critical literacy skills (e.g., encouraging students to question texts, developing students' ability to analyze texts from multiple viewpoints or perspectives)
- demonstrating the ability to plan instruction and select strategies that support students' reading and understanding of sources of physics information (e.g., physics texts, physics laboratory

manuals, scientific journals, scientific websites, graphical representations, diagrams, equations, physics notation)

Social Studies (Grades 5–12)

Teachers of Social Studies- Social Studies					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Social Studies Sub 1 (08/10-Present)	293	01	M/C	Social Studies Skills	3.1
Social Studies Sub 1 (08/10-Present)	293	02	M/C	World History	2.9
Social Studies Sub 1 (08/10-Present)	293	03	M/C	U.S. and Minnesota History	2.3
Social Studies Sub 2 (08/10-Present)	293	01	M/C	Geography	2.4
Social Studies Sub 2 (08/10-Present)	293	02	M/C	Government and Citizenship	3.2
Social Studies Sub 2 (08/10-Present)	293	03	M/C	Economics	2.0
Social Studies Sub 2 (08/10-Present)	293	04	M/C	Behavioral Sciences	2.4

Teachers of Social Studies						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Social Studies Sub 1 (08/10-Present)	293	225	68	76.79%	23.21%	249.5
Social Studies Sub 2 (08/10-Present)	293	165	128	56.31%	43.69%	239.0

Subtest 1, Subarea I: Social Studies Skills

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in the social studies.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating the ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating knowledge of explicit strategies for developing students' critical literacy skills (e.g., encouraging students to question texts, developing students' ability to analyze texts from multiple viewpoints or perspectives)

- demonstrating the ability to plan instruction and select strategies that support students' reading and understanding of social studies texts (e.g., recognizing words that signal opinions and judgments, distinguishing between primary and secondary sources, drawing inferences and conclusions, analyzing author's purpose and point of view, discerning cause-and-effect relationships, interpreting graphic presentations of social studies information, using a variety of social studies reference sources)

Middle Level Social Studies (Grades 5–8)

Teachers of Social Studies- Middle Level Social Studies					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
ML Social Studies Sub 1 (08/10-Present)	154	01	M/C	Social Studies Skills	3.2
ML Social Studies Sub 1 (08/10-Present)	154	02	M/C	World History	2.8
ML Social Studies Sub 1 (08/10-Present)	154	03	M/C	Geography	2.8
ML Social Studies Sub 2 (08/10-Present)	154	01	M/C	U.S. and Minnesota History	2.6
ML Social Studies Sub 2 (08/10-Present)	154	02	M/C	Government and Citizenship	3.1
ML Social Studies Sub 2 (08/10-Present)	154	03	M/C	Economics	3.2

Teachers of Social Studies- Middle Level Social Studies						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
ML Social Studies Sub 1 (08/10-Present)	154	122	32	79.22%	20.78%	251.2
ML Social Studies Sub 2 (08/10-Present)	154	118	36	76.62%	23.38%	250.6

Subtest 1, Subarea I: Social Studies Skills

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in the social studies.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- demonstrating knowledge of explicit strategies for developing students' critical literacy skills (e.g., encouraging students to question texts, developing students' ability to analyze texts from multiple viewpoints or perspectives)
- demonstrating ability to plan instruction and select strategies that support students' reading and understanding of social studies texts (e.g., recognizing words that signal opinions and

judgments, distinguishing between primary and secondary sources, drawing inferences and conclusions, analyzing author's purpose and point of view, discerning cause-and-effect relationships, interpreting graphic presentations of social studies information, using a variety of social studies reference sources)

Physical Education (Grades K–12)

Teachers of Physical Education					
Subtest	**# Takers**	**Subarea #**	**Subarea Type**	**Subarea Name**	**Mean Subarea Perf. Index**
Phys Ed Sub 1 (08/10-Present)	139	01	M/C	Development of Motor Skills	2.7
Phys Ed Sub 1 (08/10-Present)	139	02	M/C	Movement Activities	3.3
Phys Ed Sub 2 (08/10-Present)	136	01	M/C	Physical Fitness and Wellness	3.1
Phys Ed Sub 2 (08/10-Present)	136	02	M/C	The Physical Education Program	3.1

Teachers of Physical Education					
Subtest	**# Takers**	**# Pass**	**# Not Pass**	**% Pass**	**% Not Pass**	**Mean Total Scaled Score**
Phys Ed Sub 1 (08/10-Present)	139	130	9	93.53%	6.47%	253.9
Phys Ed Sub 2 (08/10-Present)	136	125	11	91.91%	8.09%	256.5

Subtest 2, Subarea II: The Physical Education Program

Understand the content and methods for developing students' subject-area reading skills to support their reading and learning in physical education.

- recognizing ways of using instructional practices, approaches, methods and curriculum materials, including electronic resources, to support subject-area reading and writing (e.g., familiarizing students with organizational structures used in print and digital texts; developing print processing abilities, including decoding skills)
- demonstrating knowledge of strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words
- applying knowledge of strategies for facilitating students' comprehension of subject-area texts before, during and after reading in order to develop students' reading and metacognitive abilities
- identifying principles, practices and methods for matching subject-area reading materials to the ability levels of readers in order to support their developmental, cultural and linguistic differences (e.g., differentiating instruction to meet the needs of students with various reading proficiency levels and linguistic backgrounds)

Technology (Grades 5–12)

Teachers of Technology					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Technology Sub 1 (08/10-Present)	14	01	M/C	Fundamentals of Technology	2.8
Technology Sub 1 (08/10-Present)	14	02	M/C	Energy and Power Technology	2.8
Technology Sub 1 (08/10-Present)	14	03	M/C	Transportation Technology	2.9
Technology Sub 2 (08/10-Present)	14	01	M/C	Communication Technology	3.0
Technology Sub 2 (08/10-Present)	14	02	M/C	Manufacturing and Biotechnology	2.5
Technology Sub 2 (08/10-Present)	14	03	M/C	Construction Technology	2.9

Teachers of Technology						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Technology Sub 1 (08/10-Present)	14	12	2	85.71%	14.29%	248.6
Technology Sub 2 (08/10-Present)	14	12	2	85.71%	14.29%	247.0

Subtest 1, Subarea I: Fundamentals of Technology

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in technology.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating the ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)

Visual Arts (Grades K–12)

Teachers of Visual Arts					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Visual Arts Sub 1 (08/10-Present)	78	01	M/C	Aesthetic Foundations and Critical Analysis	2.5
Visual Arts Sub 1 (08/10-Present)	78	02	M/C	Materials and Processes of Art	3.0
Visual Arts Sub 2 (08/10-Present)	78	01	M/C	Historical and Cultural Contexts of Art	2.5
Visual Arts Sub 2 (08/10-Present)	78	02	M/C	Visual Arts Education and Careers	2.6

Teachers of Visual Arts					
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Visual Arts Sub 1 (08/10-Present)	78	62	16	79.49%	20.51%	249.7
Visual Arts Sub 2 (08/10-Present)	78	53	25	67.95%	32.05%	241.0

Subtest 2, Subarea II: Visual Arts Education and Careers

Understand the content and methods for developing students' content-area reading skills to support their reading and learning in visual arts.

- demonstrating knowledge of key components and processes involved in reading (e.g., vocabulary knowledge, including orthographic and morphological knowledge; background knowledge; knowledge of academic discourse, including the syntactic and organizational structures used in print and digital academic texts; print processing abilities, including decoding skills; use of cognitive and metacognitive skills and strategies)
- demonstrating the ability to plan instruction and select strategies to support all students' content-area reading (e.g., differentiating instruction to meet the needs of students with varying reading proficiency levels and linguistic backgrounds, identifying and addressing gaps in students' background knowledge, scaffolding reading tasks for students who experience comprehension difficulties)
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words

Teachers of Vocal and Instrumental Music (Grades K–12)

Teachers of Vocal Music and of Instrumental Music					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Inst & Vocal Music Sub 1 (08/10-Present)	134	01	M/C	Aural Analysis	3.0
Inst & Vocal Music Sub 1 (08/10-Present)	134	02	M/C	Music Methodology and Reading	3.4
Inst & Vocal Music Sub 2 (08/10-Present)	128	01	M/C	Music Theory and Composition	3.4
Inst & Vocal Music Sub 2 (08/10-Present)	128	02	M/C	Music History and Culture	2.8
Inst & Vocal Music Sub 2 (08/10-Present)	128	03	M/C	Music Performance	3.4

Teachers of Vocal Music and of Instrumental Music					
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Inst & Vocal Music Sub 1 (08/10-Present)	134	126	8	94.03%	5.97%	261.7
Inst & Vocal Music Sub 2 (08/10-Present)	128	116	12	90.63%	9.38%	258.8

Subtest 1, Subarea II: Music Methodology and Reading

Understand content and methods for developing students' content-area reading skills to support their reading of English texts related to music.

- demonstrating knowledge of key components and processes involved in reading, including vocabulary knowledge, fluency, background knowledge, knowledge of academic language (i.e., the language used in academic texts and discourse), print processing abilities (e.g., decoding skills), use of cognitive and metacognitive skills and strategies and motivation
- demonstrating knowledge of explicit strategies for facilitating students' comprehension before, during and after reading content-area texts and for promoting their use of comprehension strategies
- demonstrating knowledge of explicit strategies for promoting students' academic language and vocabulary development, including their knowledge of domain-specific vocabulary words

Note: Beginning September 2011, Subtest 2 was split into two separate subtests, one specific to Vocal Music and one specific to Instrumental Music. The data provided in this report reflects the combined Subtest 2 through August 2011.

Reading Teacher (Grades K–12)

Teachers of Reading					
Subtest	# Takers	Subarea #	Subarea Type	Subarea Name	Mean Subarea Perf. Index
Reading Teacher Sub 1 (08/10-Present)	362	01	M/C	Planning and Organizing Reading Instruction	3.3
Reading Teacher Sub 1 (08/10-Present)	362	02	M/C	Assessment Tools and Practices	3.4
Reading Teacher Sub 1 (08/10-Present)	362	03	M/C	Literate and Professional Environment	3.2
Reading Teacher Sub 2 (08/10-Present)	359	01	M/C	Word Analysis and Fluency Development	2.8
Reading Teacher Sub 2 (08/10-Present)	359	02	M/C	Vocabulary and Comprehension Development	3.4

Teachers of Reading						
Subtest	# Takers	# Pass	# Not Pass	% Pass	% Not Pass	Mean Total Scaled Score
Reading Teacher Sub 1 (08/10-Present)	362	335	27	92.54%	7.46%	265.9
Reading Teacher Sub 2 (08/10-Present)	359	313	46	87.19%	12.81%	260.4

Subtest 1, Subarea I: Planning and Organizing Reading Instruction

Understand reading theories and research and child development as it relates to reading development and instruction.

- recognizing the physical, social, emotional, moral and cognitive development of children, preadolescents and adolescents as it relates to reading instruction
- demonstrating knowledge of the progression of reading development (i.e., emergent, beginning, transitional, intermediate and advanced) and awareness of variations among individual students (e.g., variations related to cultural and linguistic diversity), with heightened awareness of the needs of struggling readers
- demonstrating knowledge of reading theories and scientifically based reading research; and applying knowledge of how to translate theories into effective practices and use research to inform reading instruction at the elementary, middle school and high school levels, including recognizing how to support a philosophy of literacy instruction with theory and research

Understand principles and best practices related to planning and organizing reading instruction.

- recognizing principles of standards-based reading instruction (e.g., alignment of standards, assessment and instruction)
- identifying a wide range of instructional practices, approaches and methods to support reading instruction that addresses students' evidence-based reading needs as well as their cognitive, cultural and linguistic needs
- recognizing procedures (e.g., flexible grouping) and approaches (e.g., differentiation, intervention, enrichment, remediation) for planning and organizing reading instruction to

support the needs of students who have different developmental levels, background knowledge, reading-proficiency levels and/or linguistic backgrounds

- recognizing the importance of flexible grouping for reading instruction and identifying instructional grouping options (e.g., individual, small-group, whole-group, differentiated, peer-tutoring, computer-based) appropriate for different instructional situations and purposes

Understand the use of effective texts, materials and technological resources to support reading instruction, including appropriate texts and materials to implement interventions and remediation.

- recognizing the importance of using a wide range of texts in reading instruction (e.g., high-quality literature representing various cultures and genres, informational and content-area texts, electronic texts, non-print materials, high-interest/low-readability texts)
- applying knowledge of how to select and use a wide range of texts, materials and technological resources to address the interests, cognitive levels, cultural and linguistic backgrounds and reading needs of students; and recognizing appropriate strategies for supporting students and colleagues in the selection of materials
- applying knowledge of various instructional and informational technologies and electronic resources to support reading instruction
- applying knowledge of appropriate texts and materials for supporting instruction, interventions and remediation in key areas of reading (e.g., using decodable texts to reinforce phonics skills; using independent-level texts to promote automaticity, increase reading rate, support prosodic reading and/or build confidence; using informational texts to develop academic language, vocabulary and background knowledge)

Subtest 1, Subarea II: Assessment Tools and Practices

Understand basic principles of reading assessment and characteristics and purposes of various types of reading assessments.

- demonstrating knowledge of basic principles of reading assessment (e.g., making evidence-based decisions in planning and developing reading instruction, using multiple measures to guide instructional decision making; using ongoing, informal assessment to monitor student progress) and basic assessment concepts (e.g., validity, reliability, bias)
- recognizing different types and purposes of assessment (e.g., screening, diagnostic, progress-monitoring, formative, summative), including how various assessments are used to track student progress by individual, class, cohort and/or school
- recognizing the characteristics, uses, benefits and limitations of different types of formal assessments (e.g., norm-referenced tests, criterion-referenced tests, standardized achievement tests, diagnostic tests, placement tests)
- recognizing the characteristics, uses, benefits and limitations of different types of informal assessments (e.g., observation, checklist, retelling, reading inventory, teacher-made test, anecdotal record, miscue analysis, portfolio, writing in response to reading)

- applying knowledge of appropriate strategies for communicating results of assessments to stakeholders (e.g., students, parents/guardians, colleagues, administrators)

Understand how to select, administer and interpret the results of assessments in all areas of reading.

- applying knowledge of how to select and administer various formal reading assessments and demonstrating ability to interpret the results of such assessments
- applying knowledge of how to select and administer appropriate assessments in phonological and phonemic awareness, concepts of print, letter recognition and formation and letter-sound correspondence and demonstrating ability to analyze errors and interpret the results of such assessments
- applying knowledge of how to select and administer appropriate assessments in phonics and other word identification skills and related spelling skills and demonstrating ability to analyze errors and interpret the results of such assessments
- applying knowledge of how to select and administer appropriate assessments in fluency and demonstrating ability to interpret the results of such assessments
- applying knowledge of how to select and administer appropriate assessments in vocabulary development and demonstrating ability to interpret the results of such assessments
- applying knowledge of how to select and administer appropriate assessments in comprehension and comprehension strategies and demonstrating ability to interpret the results of such assessments
- applying knowledge of how to administer appropriate assessments to determine students' independent, instructional and frustration reading levels and demonstrating ability to interpret the results of such assessments

Understand how to use assessment data to plan and develop appropriate instruction for students in all areas of reading.

- demonstrating ability to use assessment results, including error analysis, to plan appropriate differentiated instruction, interventions and remediation to address students' needs in phonological and phonemic awareness, concepts of print, letter recognition and formation and letter-sound correspondence
- demonstrating ability to use assessment results, including error analysis, to plan appropriate differentiated instruction, interventions and remediation to address students' needs in phonics and other word identification skills and spelling
- demonstrating ability to use assessment results to plan appropriate differentiated instruction, interventions and remediation to address students' needs in fluency
- demonstrating ability to use assessment results to plan appropriate differentiated instruction, interventions and remediation to address students' needs in vocabulary development
- demonstrating ability to use assessment results to plan appropriate differentiated instruction, interventions and remediation to address students' needs in comprehension and the development of comprehension strategies

Subtest 1, Subarea III: Literate and Professional Environment

Understand how to create and maintain a literate environment in the classroom and school.

- recognizing the importance of and strategies for using students' interests, reading abilities and cognitive, cultural, or linguistic backgrounds as foundations for the reading program and for promoting all students' ongoing development in reading and writing
- recognizing the importance of and strategies for promoting a shared vision that all students can develop effective literacy skills regardless of their cognitive, cultural, or linguistic background
- demonstrating knowledge of key components of an effective reading program (e.g., explicit instruction, guided practice, independent reading, read-aloud, interactive talk, opportunities for response, reading and writing across the curriculum) and recognizing effective strategies and organizational structures for fostering these components both in the classroom and schoolwide
- recognizing the importance of motivation and engagement in reading and strategies for creating and maintaining a motivating, literate classroom and school environment by providing authentic, engaging reasons to read and write, by using literature and other texts to engage students in dialogue, critical thinking and reflection around issues that are important to them (e.g., social justice) and by promoting students' critical literacy skills (e.g., encouraging students to question what they are reading and to analyze texts from multiple viewpoints or perspectives)
- demonstrating knowledge of strategies for integrating technology into reading instruction to create and maintain an environment that emphasizes both conventional and new literacies, including digital literacy and ensures equity of access to technology for all students
- recognizing the importance of and strategies for facilitating home-school connections that support students' literacy development

Understand the role of the reading professional, including how to foster ongoing professional development in reading.

- applying knowledge of strategies for serving as a role model to colleagues (e.g., displaying positive attitudes toward literacy in the school and district, actively engaging in effective reading and writing practices)
- applying knowledge of strategies for promoting and facilitating ongoing self-reflection related to teaching and student learning in the area of reading
- applying knowledge of strategies for keeping well-informed in the field of reading and for sharing up-to-date knowledge of literacy development with colleagues
- applying knowledge of strategies for collaborating with and providing guidance for colleagues who seek support for classroom instruction in reading, including applying knowledge of effective coaching practices (e.g., how to provide constructive feedback on instructional practice, how to encourage colleagues' self-reflection)
- applying knowledge of strategies for engaging in, initiating, implementing and evaluating professional development programs in the field of reading, including actively seeking opportunities to participate in learning communities and professional organizations in the field

and working collaboratively with administrators and/or district leadership to promote sustainable literacy initiatives and systems of support

- demonstrating knowledge of current state and federal legislation related to the field of reading

Subtest 2, Subarea I: Word Analysis and Fluency Development

Understand the development of emergent literacy skills, including phonological and phonemic awareness, concepts of print and alphabetic knowledge and skills and how to address students' needs in these areas.

- demonstrating knowledge of phonological awareness and research-based, explicit instruction in phonological awareness skills (e.g., detecting and identifying individual words in a sentence or string of words, syllables within words, rhyming words, onset/rime)
- demonstrating knowledge of phonemic awareness and research-based, explicit instruction in phonemic awareness skills (e.g., recognizing that words are made up of separate phonemes; distinguishing initial, medial and final phonemes; orally blending, segmenting, deleting and substituting phonemes)
- demonstrating knowledge of basic concepts of print and explicit strategies for promoting students' development of concepts of print, including understanding that print conveys meaning
- demonstrating knowledge of the development of uppercase and lowercase letter recognition and letter formation skills and research-based, explicit instruction in letter recognition and letter formation
- demonstrating knowledge of the alphabetic principle and the nature of letter-sound relationships in English and research-based, explicit instruction in letter-sound correspondence, including recognizing the role of invented (i.e., phonetic) spelling in learning letter-sound relationships
- applying knowledge of research-based, explicit instructional strategies and interventions to address the assessed needs of individual students (e.g., English language learners, struggling readers, students with reading disabilities) related to phonological and phonemic awareness, concepts of print, letter recognition and formation and letter-sound correspondence, including incorporating multisensory practice through tracing and writing

Understand the development of phonics and other word identification skills, including related spelling skills and how to address students' needs in these areas.

- demonstrating knowledge of basic concepts related to beginning reading development (e.g., relationships between beginning stages of reading, writing and spelling; reciprocity between decoding and encoding)
- demonstrating knowledge of basic terminology used to describe common letter combinations and/or letter-sound relationships in English (e.g., consonant digraphs, consonant blends, vowel digraphs, diphthongs, r- and l-controlled vowels)

- applying knowledge of research-based, systematic phonics instruction to promote students' accurate decoding and spelling of regular words of increasing linguistic complexity (e.g., VC, CVC, CVCC, CCVC, CVVC and CVCe through CCCVCCC)
- applying knowledge of common spelling patterns (i.e., word families) to promote students' accurate spelling and recognition of words that contain a common rime (e.g., -at, -ight, -ump)
- applying knowledge of research-based, explicit instruction in sight words, common inflectional morphemes (e.g., -ed, -er, -est, -ing, -s) and related orthographic guidelines (e.g., doubling the final consonant, dropping or keeping a silent -e, or changing y to i when adding an inflection) to promote students' accurate decoding and spelling of irregular and/or inflected words
- applying knowledge of research-based, explicit instruction in regular, open and closed syllable patterns and syllabication guidelines; structural analysis skills (e.g., recognizing word roots, derivational prefixes and suffixes and compound words); and orthographic patterns based on etymology (e.g., phys-, psych-) to promote students' accurate decoding and spelling of multi-syllable words
- applying knowledge of research-based, explicit instructional strategies and interventions to address the assessed needs of individual students (e.g., English language learners, struggling readers, students with reading disabilities) related to phonics and other word identification skills and related spelling skills, including appropriate strategies to address the needs of adolescent learners

Understand the development of fluency and how to address students' needs in this area.

- demonstrating knowledge of the role of fluency in reading comprehension, key indicators of reading fluency (i.e., accuracy, rate and prosody) and the role of automaticity in fluency development
- applying knowledge of research-based, explicit instruction (e.g., echo reading, choral reading, repeated reading, readers theatre) to promote students' development of automaticity and fluency, including when and how to promote fluency with respect to oral and silent reading
- demonstrating knowledge of common factors that disrupt fluency (e.g., lack of automaticity, weakness in phonics and other word identification skills, lack of familiarity with academic vocabulary and/or syntactic structures, limited background knowledge) and explicit instructional strategies, approaches and practices to address these factors
- applying knowledge of research-based, explicit instructional strategies and interventions to address the assessed needs of individual students (e.g., English language learners, struggling readers, students with reading disabilities) related to fluency, including appropriate strategies to address the needs of adolescent learners

Subtest 2, Subarea II: Vocabulary and Comprehension Development

Understand vocabulary development and how to address students' needs in this area.

- demonstrating awareness of the critical role vocabulary plays in reading and the importance of engaging students in early and continual language experiences to promote their development of robust listening, speaking, reading and writing vocabularies

- applying knowledge of components of effective vocabulary instruction, including instruction of content-area vocabulary (e.g., explicitly teaching words and word-learning strategies, promoting word consciousness and a love of words, encouraging and supporting wide reading, providing meaningful exposure to and opportunities to use new vocabulary) and criteria for selecting words for vocabulary instruction

- applying knowledge of research-based, explicit instruction in independent strategies for building vocabulary (e.g., using structural analysis to deduce meaning from root words/morphemes, prefixes and suffixes) and for determining the meaning and pronunciation of unfamiliar or multiple-meaning words encountered through listening and reading (e.g., using contextual clues, such as appositives and semantic and syntactic clues; using reference materials)

- applying knowledge of research-based, explicit instruction in words and their meanings, including the etymology of words (e.g., common Latin and Greek roots), idiomatic expressions and foreign words and expressions used in English

- applying knowledge of research-based, explicit instructional strategies and interventions to address the assessed needs of individual students (e.g., English language learners, struggling readers, students with reading disabilities) related to vocabulary development, including appropriate strategies to address the needs of adolescent learners

Understand the development of comprehension and comprehension strategies and how to address students' needs in this area.

- applying knowledge of factors that affect reading comprehension (e.g., automatic decoding, fluency, vocabulary knowledge, knowledge of academic language structures, background knowledge, comprehension strategies, linguistic and organizational complexity of text)

- recognizing different levels of reading comprehension (i.e., literal, inferential and evaluative) and applying knowledge of explicit strategies for promoting students' literal, inferential and evaluative comprehension before, during and after reading

- applying knowledge of research-based, explicit instruction in comprehension strategies (e.g., prediction, making connections to prior knowledge, monitoring, think-aloud, text structure, visual representation, mental imagery, summarization, questions/questioning) that students can use to enhance their own comprehension of texts and promote their independence and self-efficacy as readers

- applying knowledge of differentiated instruction and interventions to address the assessed needs of individual students (e.g., English language learners, struggling readers, students with reading disabilities) related to comprehension and the development of comprehension strategies, including appropriate strategies to address the needs of adolescent learners

Understand literary/narrative texts and how to promote students' ability to comprehend, analyze and respond to these texts.

- demonstrating knowledge of children's and adolescents' literature representing a range of genres (e.g., poetry, drama, prose), eras, perspectives and cultures, including recognizing challenges presented by different types of literary/narrative texts and identifying key characteristics and elements of literary/narrative texts (e.g., story elements such as character and plot, stylistic elements such as figurative language); and applying knowledge of explicit instruction in key features, genres and elements of literary/narrative texts to promote students' comprehension
- applying knowledge of explicit instruction in reading response skills to promote students' appreciation of literary/narrative texts and support their development of critical and independent thinking about literary/narrative texts (e.g., using evidence from a text to support responses, analyzing story elements, interpreting figurative language, recognizing that texts can reflect diverse cultural perspectives)
- applying knowledge of critical literacy to encourage students to question what they are reading while analyzing literary/narrative texts from multiple viewpoints or perspectives
- applying knowledge of reading response skills to engage students in dialogue, critical thinking and reflection around issues of social justice
- applying knowledge of differentiated instruction and interventions to address the assessed needs of individual students (e.g., English language learners, struggling readers, students with reading disabilities) related to their ability to comprehend, analyze and respond to different types of literary/narrative texts, including appropriate strategies to address the needs of adolescent learners

Understand informational/expository texts and how to promote students' ability to comprehend, analyze and respond to these texts for different purposes.

- demonstrating knowledge of various types of informational/expository texts, including recognizing challenges presented by different types of informational/expository texts and identifying key textual features (e.g., indexes, headings), graphic features (e.g., charts, diagrams) and organizational text structures (e.g., descriptive, chronological, cause/effect, comparison/contrast); and applying knowledge of explicit instruction in key features and organizational structures of informational/expository texts to promote students' comprehension
- applying knowledge of explicit instruction in analysis, response and research skills to support students' development of critical and independent thinking about informational/expository texts (e.g., using evidence from a text to support conclusions; analyzing an author's point of view or argument; evaluating a text with respect to credibility, bias, internal consistency, or logic; withholding judgment about a text; synthesizing information from multiple sources; considering multiple solutions to a problem)
- applying knowledge of critical literacy to encourage students to question what they are reading while analyzing informational/expository texts from multiple viewpoints or perspectives

- applying knowledge of analysis, response and research skills to engage students in dialogue, critical thinking and reflection around issues of social justice
- applying knowledge of differentiated instruction and interventions to address the assessed needs of individual students (e.g., English language learners, struggling readers, students with reading disabilities) related to their ability to comprehend, analyze and respond to different types of informational/expository texts for different purposes, including appropriate strategies to address the needs of adolescent learners

Understand how to use oral language and writing to support, reinforce and enhance students' reading development and comprehension.

- recognizing the developmental progression of oral language and the foundational role of oral language in reading development (e.g., with respect to oral vocabulary knowledge, acquisition of syntax, transfer of skills from oral language to written language)
- applying knowledge of explicit oral language instruction that supports, reinforces and enhances students' reading development and their appreciation and comprehension of texts (e.g., read-alouds; discussions for different purposes, such as to clarify meaning and/or build background knowledge; literature circles; think-pair-share; questioning the author; oral preview-review of text content), including appropriate strategies to address the needs of adolescent learners
- applying knowledge of explicit instruction to promote students' writing development (e.g., knowledge of academic language structures and writing conventions) in order to support, reinforce and enhance their reading development and their appreciation and comprehension of texts (e.g., written summaries, response journals, outlines, notes, graphic organizers), including appropriate strategies to address the needs of adolescent learners
- recognizing the special linguistic needs of English language learners and the importance of using explicit instruction to help them use and develop their oral language skills and knowledge of spoken and written academic English to support their reading development and learning

Appendix A: Reading Task Force Research Base

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