



## ReadBasix - Common Core Alignment

Evaluation of the Alignment of the ReadBasix Item Pool to the Common  
Core State Standards for English Language Arts

Dr. Margaret Opatz

Ryan Hershey, M. Ed.



## Executive Summary

The purpose of this alignment study was to align the ReadBasix assessment's item bank to the *Common Core State Standards for English Language Arts (ELA)* in Grades 3-12. ReadBasix is a diagnostic reading assessment, based on the Science of Reading, that addresses learning loss and informs instruction and intervention. This research-based assessment allows educators to gather meaningful data on 5 foundational reading skills and reading comprehension.

This study examined the extent to which the ReadBasix item pool represents the *Common Core State Standards for English Language Arts* in Grades 3-12. The results of the study contribute to evidence gathered by Capti to evaluate the use of ReadBasix in education systems aligned to the *Common Core State Standards for ELA*. Research questions guiding this research are:

1. *To what extent does the item pool represent the full range of the Common Core State Standards for English Language Arts in Grades 3-12?*
2. *To what extent does the item pool measure student knowledge at the same level of complexity expected by the Common Core State Standards for English Language Arts in Grades 3-12?*

The alignment study was implemented by two expert content specialists who have extensive experience with the content area, assessment development, and alignment studies (Table 1). Through a series of online group and individual activities, the alignment raters went through training, qualification, and rating processes. A content lead led the other rater through the process by providing assignments, and discussing the mechanics of item rating, as well as monitoring all alignment activities. Agreement with the content lead's rating results was reviewed for the other rater. Both raters were required to agree with at least eight items (80%) before continuing the study.

The content lead and reading rater completed their ratings independently, reviewing all of the assigned items and providing depth of knowledge (DOK) and standard assignments for each item. The content lead followed behind the reading rater with a representative review of 20% of the items. In the cases where the reading rater and content lead disagreed, they discussed the disagreement and were permitted to make a change in a second round of ratings. If the raters could not agree, the content lead's rating was the rating of record.

Analyses were conducted to provide alignment evaluation evidence for the ReadBasix item pool in terms of categorical concurrence, DOK, range of knowledge, and balance of knowledge.

The results indicated that the ReadBasix item pool is well-aligned to the *Common Core State Standards for English Language Arts* in Grades 3-5 specific to the Foundational Reading and Language Standards. ReadBasix's item bank tended to show strong alignment in terms of categorical concurrence, cognitive complexity, balance of knowledge, and range of knowledge at the standard level for Grades 3-5. Grades 6-8 showed moderate alignment on the Language Standards (Table E1)

Table E1. Overall Evaluation of Alignment

Grade Level	Standard	Categorical Concurrence	Depth of Knowledge	Balance of Knowledge	Range of Knowledge
Reading - Information					
3	RI.3	Strong	Weak	None	Moderate
4	RI.4	Strong	Weak	None	Moderate
5	RI.5	Strong	Weak	None	Moderate
6	RI.6	Strong	Weak	None	Moderate
7	RI.7	Strong	Weak	None	Moderate
8	RI.8	Strong	Weak	None	Moderate
9-10	RI.9-10	Strong	Weak	None	Moderate
11-12	RI.11-12	Strong	Weak	None	Moderate
Reading - Foundational					
3	RF.3	Strong	Strong	Strong	Strong
4	RF.4	Strong	Strong	Strong	Strong
5	RF.5	Strong	Strong	Strong	Strong
Language					
3	L.3	Strong	Strong	Strong	Strong
4	L.4	Strong	Strong	Strong	Strong
5	L.5	Strong	Strong	Strong	Strong
6	L.6	Strong	Weak	Moderate	Moderate
7	L.7	Strong	Weak	Moderate	Moderate
8	L.8	Strong	Weak	Moderate	Moderate
9-10	L.9-10	Strong	None	None	None
11-12	L.11-12	Strong	None	None	None

# Table of Contents

<b>List of Figures and Tables</b>	<b>3</b>
<b>Section 1. Overview</b>	<b>4</b>
Study Purpose	4
Document Purpose	4
<b>Section 2. Methodology</b>	<b>5</b>
Procedure	5
Content Standards	6
Item Sample	7
Evaluation Criteria	7
Study Participants	8
<b>Section 3. Implementation</b>	<b>9</b>
<b>Section 4. Results</b>	<b>10</b>
<b>Section 5. Discussion</b>	<b>13</b>
Evaluating Validity Evidence	14
<b>References</b>	<b>16</b>
<b>Appendix</b>	<b>17</b>
Appendix A: Evaluation of Categorical Concurrence at the Standard Level	17
Appendix B: Evaluation of Categorical Concurrence at the Strand Level	18
Appendix C: Depth of Knowledge to Reading Standard	21
Appendix D: Depth of Knowledge at the Standard Level	29
Appendix E: Depth of Knowledge at the Strand Level	31
Appendix F: Evaluation of Balance of Knowledge	37
Appendix G: Evaluation of Range of Knowledge	38

## List of Figures and Tables

Figure 1. Outtake of the Common Core’s Learning Standards for ELA	7
Table 1. Participants’ Expertise	9
Table 2. Number of Items, Number of On-grade Items, Number of Full and Partial Matches	11
Table 3. Percentage of Items by DOK and Grade Level	11
Table 4. Number of Items used for Training Qualification, and General Rating	12
Table 5. Rater Agreement Rates – Reading Set 1	12
Table 6. Rater Agreement Rates – Reading Set 2	12
Table 7. Overall Evaluation of Alignment	14-15

## **Section 1. Overview**

The purpose of this alignment study was to align the ReadBasix assessment item bank to the *Common Core State Standards for English Language Arts (ELA)* in Grades 3-12. ReadBasix is a diagnostic reading assessment, based on the Science of Reading, that addresses learning loss and informs instruction and intervention. This research-based assessment allows educators to gather meaningful data on 5 foundational reading skills (i.e., word recognition and decoding, vocabulary, morphology, sentence processing, reading efficiency) and reading comprehension. ReadBasix scores are intended to provide valuable data to identify students' strengths and areas of need in foundational reading skills. Teachers can use the information to identify what is likely impeding reading comprehension.

### **Study Purpose**

This study examined the extent to which the ReadBasix item pool represents the *Common Core State Standards for ELA* in Grades 3-12. The results of the study contribute to evidence gathered by Capti to evaluate the use of ReadBasix in education systems aligned to the *Common Core State Standards for ELA*. Research questions guiding this research are:

1. *To what extent does the item pool represent the full range of the Common Core State Standards for ELA in Grades 3-12?*
2. *To what extent does the item pool measure student knowledge at the same level of complexity expected by the Common Core State Standards for ELA in Grades 3-12?*

### **Document Purpose**

The purpose of this document is to provide technical documentation for the alignment study that Charmtech Labs LLC, Capti led in Fall 2023. Section 2 summarizes the methodology used for the study. Section 3 provides information on workshop implementation. Section 4 presents the results, and Section 5 discusses how evidence from the study is relevant to the overall validity argument.

## Section 2. Methodology

The intent of this study was to evaluate the alignment of the ReadBasix item pool to the *Common Core State Standards for ELA* in Grades 3-12. The study examined alignment in order to evaluate the “appropriateness of test content, the procedures followed in specifying and generating test content ... with reference to ... the construct the test is intended to measure or the domain it is intended to represent” (American Educational Research Association (AERA), American Psychological Association (APA), National Council on Measurement in Education (NCME), 2014, p. 26).

### Procedure

This alignment evaluation of the ReadBasix item pool used the procedures based on Webb (2007). Each standard was matched to a depth-of-knowledge (DOK) level, and each item was matched to a content standard (i.e., the *Common Core State Standards for ELA* in Grades 3-12) and to a DOK level. Evaluation criteria were then applied to judge relative alignment.

#### Step 1. Assign DOK to Standards

Once the set of common and unique standards was identified, content experts assigned DOK values to the *Common Core State Standards for ELA* as a scale of cognitive complexity. These experts used Webb’s (2007) DOK scale to make their ratings. The standards were evaluated and the DOK *range* and *target* determined by examining the intended student learning outcome. Multiple DOK levels were assigned to each standard, if such decisions were consistent with expert judgment (Forte, 2017).

#### Step 2. Review Items

All items were reviewed in the Capti user interface, hosted by Capti. Content experts were skilled at navigating the tasks in the portal. They recorded their judgements in a spreadsheet. They reviewed each item and identified the primary standards and DOK level to which the item aligned. If they deemed it appropriate, experts could assign a secondary standard.

The content experts worked together to ensure consistent understanding and application of alignment evaluation criteria. These discussions focused on distinguishing between difficulty and cognitive complexity (i.e., DOK) with examples and practice. After participating in a training session, the raters applied their training to a sample of items for discussion and feedback prior to completing a calibration exercise.

In order to align items to a given content standard (i.e., the *Common Core State Standards for ELA*), the item addressed the whole standard or an integral part of the standard. If the item could not be matched to content at the existing grade level, the rater matched the item to a content standard from another grade level in which the content was considered aligned.

Content experts made a holistic determination of grade-level content demands. This holistic determination took into account vocabulary, context, complexity of the task, readability of the text, and the content included in distractors.

## The Content Leader

The content leader reviewed 20% of items in each grade level following Steps 1 through 2.

After training, the content leader reviewed the 10 items with the other rater in order to apply training instructions, promote discussion, and provide feedback. Following this review, the content leader reviewed an additional 10 items that had already been rated by the rater. The rater was required to agree with the content leader 80% to 100% of the time before rating items independently.

After training and calibration, the content leader conducted “read behinds” in which she reviewed 20% of the items. For any items where disagreement occurred between the content leader and the rater, the content leader’s judgment became the rating of record.

## Content Standards

For the purposes of this study, the following nomenclature was applied to describe the levels of these standards:

- Standard
  - Strand
    - Indicator

Figure 1 illustrates the application of this nomenclature using a Grade 3 example.

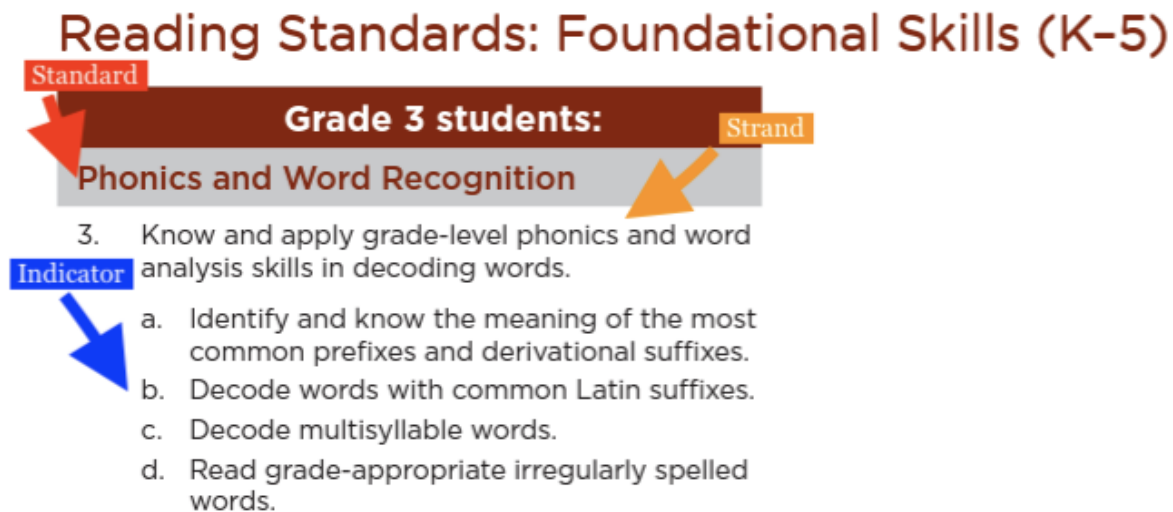


Figure 1. Outtake of the Common Core’s Learning Standards for ELA

## Focus Standards for English Language Arts

It is important to note that this study focused on the reading (literature, informational, and foundational: Grades 3-5) and language standards of the *Common Core State Standards for ELA* in Grades 3-12. However, upon initial evaluation, it became clear that the Reading Literature Standards were not applicable to the ReadBasix item bank, so those standards were removed from consideration.

## **Item Sample**

Once the final alignment ratings were determined, the item set was limited to those items that were found to be aligned to on-grade standards. The alignment study included a total of 637 items.

## **Evaluation Criteria**

Criteria for alignment addressed categorical concurrence, DOK, balance of knowledge (BOK), and range of knowledge (ROK) in order to evaluate the adequacy of alignment between the ReadBasix item pool and the content standards. In sum, alignment was determined in terms of content, balance of content, and cognitive complexity at the full depth and breadth of the content standards.

### **Categorical Concurrence**

Categorical concurrence refers to how similar or consistent the content is on the standards and the assessment. Raters' alignment judgments (e.g., full, partial, none) were used to establish the average number of items assigned to a standard. Webb requires six items per reporting category (i.e., standard).

The following criteria were used:

1. If there were six or more items measuring each standard, the criterion was judged strongly aligned.
2. If there were five items measuring each standard, the criterion was judged moderately aligned.
3. If there were four items measuring each standard, the criterion was judged weakly aligned.
4. If there were fewer than four items measuring each standard, the criterion was judged not aligned.

### **Depth of Knowledge**

With the DOK assignment, raters investigated the cognitive complexity of the standards and the items. In general, the items in the item pool should reflect the same range of cognitive complexity as what is expected by the standards. For this evaluation, the following criteria were applied:

1. If 50% or more of the items corresponding to a standard were considered at or above the DOK level of that standard, the criterion was considered strongly aligned.
2. If 40-49% of the items were at or above the DOK level of the standard, then the criterion was considered moderately aligned.
3. If 30-39% of the items were at or above the DOK level of the standard, then the criterion was considered weakly aligned.

Each strand was assigned a DOK level by the content experts, and each item was assigned to an indicator and to a DOK. (Note that the DOK-to-item assignment is independent of the DOK of the strand). Once data were collected, the DOK consistency of the item pool to the content standards was examined.

### **Balance of Knowledge**

The BOK is a measure of how items are distributed across the standards. This alignment criterion examines whether the number of test items matched to a standard proportional to the number of strands



within the standard. For this, a Webb index score was computed for each standard. The following criteria were applied:

1. If the BOK was 0.70 or higher, then the criterion was strongly aligned.
2. If the BOK was 0.60 to 0.69, then the criterion was moderately aligned.
3. If the BOK was lower than 0.59, then the criterion was not aligned.

**Range of Knowledge**

The ROK examines the extent to which the item pool covers the standards. The following criteria were applied:

1. If at least 50% of the strands within a standard was covered by an assessment item, then the ROK was deemed strongly aligned.
2. If 40-49% of the strands within a standard was covered by an assessment item, then the ROK was deemed moderately aligned.

**Study Participants**

Study participants included a project lead who was also a master rater and the content lead, and a reading rater. Both participants have over a decade of experience in education and are content experts in the fields of reading and educational measurement. The lead has experience with alignment evaluations at the university and state level. Both raters are employed by Capti who distributes ReadBasix, but neither were part of the creation of ReadBasix or are affiliated with Educational Testing Services (ETS), the creator of ReadBasix. Table 1 presents each study participant and a brief description of relevant expertise.

*Table 1. Participants' Expertise*

<b>Contributor</b>	<b>Role and Responsibility</b>	<b>Experience</b>
Dr. Margaret Osgood Opatz	Project Lead, Master Rater, Content Lead  Oversee project, review items for DOK and content alignment	Dr. Opatz has been active in the field of psychometrics for nearly a decade. During this time, she has conducted alignment studies at the university-level to ensure accreditation and at the state-level to ensure assessments aligned to the state standards. Dr. Opatz is a content expert in reading and literacy and has over a decade of experience in researching and teaching reading.
Ryan Hershey, M.Ed.	Reading Rater  Review items for DOK and content alignment	Mr. Hershey, has worked in the education field for 16 years as an English teacher and reading interventionist. He has extensive knowledge of reading development and assessments. As an educator, he is also familiar with Webb's DOK. He has also conducted several alignment studies to ensure assessment items are aligned to various state's standards.

## **Section 3. Implementation**

The alignment study was implemented through a series of online group and individual activities. First, the both members of the alignment study team met for an orientation to the process. The initial training session provided the purpose for the alignment study, an overview of the assessments, and an introduction to the first task—alignment of DOK to standard.

Once the standard alignment was established, the lead met with the rater to discuss the mechanics of item rating. To conclude the training phase, both team members rated a representative set of items and met together to discuss the results of the training review. This discussion allowed for clarification of alignment criteria and promoted consistent interpretation of alignment concepts and their application.

Both raters participated in a qualification round in which they reviewed and rated a representative sample of 10 items. Agreement between the two parties was discussed until both raters came to consensus. Raters were required to agree with at least eight items (80%) to continue with participation in the study.

Study raters completed their ratings independently, reviewing all of the assigned items and providing DOK and standard assignments for each item. The project lead followed behind the other rater with a review of 20% of the items. In the cases where there was a discrepancy, the raters discussed the disagreement and allowed the rating to be changed. If the raters could not agree, the project lead's rating was the rating of record.

## Section 4. Results

Analyses were conducted to provide alignment evaluation evidence for the ReadBasix item pool in terms of categorical concurrence, DOK, BOK, and ROK. Within this section, we present the results.

### Descriptive Statistics

Table 2 shows the number of items in the reading item pools. All items were aligned to an on-grade standard (Reading – Informational, Reading – Foundational, or Language).

Table 2. Number of Items, Number of On-grade Items, Number of Strong and Partial Matches

Grade Band	Number of Items	Number of Items Aligned to Any Standard	Number of Items Aligned to an On-grade Standard	Number of Items Assigned to Strong Matches	Number of Items Assigned to Partial Matches	Number of Items Aligned to a Secondary Standard
3-5	213	213	213	213	0	0
6-8	207	207	207	207	0	0
9-12	217	217	217	217	0	0

Table 3 shows the distribution of DOKs by text type and grade level. In each grade, the majority of items align to DOK 2. The items are split between Informational, Foundational (Grades 3-5), and Language. .

Table 3. Percentage of Items by DOK, Standard Type, and Grade Level

Grade Band	Standard Type	DOK 1	DOK 2	DOK 3	DOK 4	Total %	Number of Items
3-5	Informational	3%	13%	2%	0%	18%	213
	Foundational	0%	31%	8%	0%	39%	
	Language	11%	23%	9%	0%	43%	
6-8	Informational	9%	4%	4%	0%	17%	207
	Language	27%	44%	12%	0%	83%	
9-12	Informational	4%	0%	4%	0%	8%	217
	Language	24%	53%	15%	0%	92%	

**Rater Agreement**

Table 4 shows the number of items that were used for training and for qualifying. The project lead trained the rater by discussing 6 items (two items aligned to each grade band). The raters discussed each item, the primary content alignment of that item, the alignment strength (i.e., full, partial, not aligned), the DOK level, and any secondary content alignment, if applicable.

After training, the reviewers rated a set of 10 qualifying items. For the qualification round, the project lead assigned a primary and secondary (if applicable) standard, the DOK, and the alignment strength to the items in the qualifying set. To qualify, the reviewers had to agree with the project lead 80% of the time on the primary alignment and the DOK of the qualifying set. The Reading Raters met the threshold for agreement and qualified on the first qualifying round.

*Table 4. Number of Items used for Training, Qualification, and General Rating*

Grade Band	Training	Qualifying Set	Remainder of Pool	Total Number of Items
3-5	3	5	205	213
6-8	3	5	199	207
9-12	3	5	209	217

Tables 5 and 6 report the results of rater agreement for the 20% read-behind ratings. Table 5 shows the agreement rates for the first set of items. Table 6 shows the agreement rates for the second set of items. The agreement rates improved in Set 2.

*Table 5. Rater Agreement Rates – Reading Set 1*

Grade Band	Total Items	Items Reviewed	Overall Agreement	Agreement On Content	Agreement on DOK	Perfect + Partial Agreement
3-5	20	8	75%	87.5%	87.5%	75%
6-8	20	8	100%	100%	100%	100%
9-12	20	8	87.5%	100%	100%	87.5%

*Table 6. Rater Agreement Rates – Reading Set 2*

Grade Band	Total Items	Items Reviewed	Overall Agreement	Agreement On Content	Agreement on DOK	Perfect + Partial Agreement
3-5	40	10	100%	100%	100%	100%

6-8	20	4	100%	100%	100%	100%
9-12	30	6	100%	100%	100%	100%

**Reading Alignment Results**

**Categorical Concurrence.** Categorical concurrence was evaluated using Webb’s criterion of six items measuring each standard. For reading, we investigated Categorical Concurrence at the standard *and* strand levels. At the standard level, the ReadBasix item pools showed strong alignment across all grade levels in terms of categorical concurrence (see Table A in [Appendix A](#)).

Table B in [Appendix B](#) shows the item counts at the strand level. Even though there is strong alignment at the standard level, there is room for improvement at the strand level. In general, Strands 1, 2, 4, and 10 tend to have better coverage than the other strands in Reading – Informational across all grades. Foundational Reading Strands have strong alignment. Language Strands 1, 2, 4, and 6 had better coverage than Strands 3 and 5 across grades.

**Depth of Knowledge.** Content experts assigned each standard with a range of DOK levels ([Appendix C](#), Table C) as well as a target DOK to investigate the cognitive complexity of the standard and the items. Raters assigned a DOK to each item without regard to the DOK of the intended standard. Items were compared to the target DOK.

Table D in [Appendix D](#) shows the results of the DOK study at the standard level. At this level, the item pool demonstrated no alignment and strong alignment depending on the standard. Table E in [Appendix E](#) shows the results of the DOK study at the strand level. At this level, the item pool demonstrated no alignment and strong alignment depending on the strand.

**Balance of Knowledge.** Balance of knowledge is a measure of how items are distributed across the strands within a standard. Table F in [Appendix F](#) shows this measure. The items appear to be better distributed in Grades 3-5 Foundational Reading Standards and Language Standards, though Grades 6-8 Language Standards show moderate alignment.

**Range of Knowledge.** Table G in [Appendix G](#) shows the ROK for the Reading and Language Standards. Here, there is strong alignment to the Foundational Reading Standards and Language Standards in Grades 3-5. There is moderate alignment to the Reading Informational Standards and to the Language Standards in Grades 6-8. There is no alignment in Language Standards for Grades 9-12.

## Section 5. Discussion

The study asked,

1. *To what extent does the ReadBasix item pool represent the full range of the Common Core State Standards for English Language Arts in Grades 3-12?*
2. *To what extent does the ReadBasix item pool measure student knowledge at the same level of complexity expected by the Common Core State Standards for English Language Arts in Grades 3-12?*

Adequate rater reliability was necessary in order to evaluate the alignment criteria with consistency. To obtain this, raters were trained and qualified prior to starting the rating on their own. The study found that rater reliability was generally strong with agreement between 75% and 100% (Tables 5 and 6).

In general, results indicated that the ReadBasix item bank is well aligned to specific standards in the *Common Core State Standards for English Language Arts*. Specifically, ReadBasix is aligned to the Language and Foundational Reading Standards for Grades 3-5. The ReadBasix item bank tended to show strong alignment in terms of categorical concurrence, cognitive complexity, balance of knowledge, and range of knowledge at the Standard Level for Grades 3-5 (Table 7).

Based on the evidence from study results, the ReadBasix item pools covered the full range of assessable content standards for Grades 3-5. The results of this study provide strong evidence that the item pool measures student knowledge at the same level of complexity expected by the *Common Core State Standards for English Language Arts in Grades 3-5* (Table 7). It can also be argued that the ReadBasix item pool provides a valuable construct for older readers who may be struggling with foundational reading skills. And, while the standards for Grades 6-12 are not as strongly aligned as those for Grades 3-5, there was alignment across some of the categories used to determine alignment.

*Table 7. Overall Evaluation of Alignment*

Grade Level	Standard	Categorical Concurrence	Depth of Knowledge	Balance of Knowledge	Range of Knowledge
Reading - Information					
3	RI.3	Strong	Weak	None	Moderate
4	RI.4	Strong	Weak	None	Moderate
5	RI.5	Strong	Weak	None	Moderate
6	RI.6	Strong	Weak	None	Moderate
7	RI.7	Strong	Weak	None	Moderate
8	RI.8	Strong	Weak	None	Moderate

Grade Level	Standard	Categorical Concurrence	Depth of Knowledge	Balance of Knowledge	Range of Knowledge
9-10	RI.9-10	Strong	Weak	None	Moderate
11-12	RI.11-12	Strong	Weak	None	Moderate
Reading - Foundational					
3	RF.3	Strong	Strong	Strong	Strong
4	RF.4	Strong	Strong	Strong	Strong
5	RF.5	Strong	Strong	Strong	Strong
Language					
3	L.3	Strong	Strong	Strong	Strong
4	L.4	Strong	Strong	Strong	Strong
5	L.5	Strong	Strong	Strong	Strong
6	L.6	Strong	Weak	Moderate	Moderate

### Evaluating Validity Evidence

Evidence from this alignment study supports the validity argument by addressing relevant portions of the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 2014). Specifically, the study provides evidence to support Standard 1.11 that states,

When rationale for test score interpretation for a given use rests in part on the appropriateness of test content, the procedures followed in specifying and generating test content should be described and justified with reference to...the construct the test is intended to measure or the domain it is intended to represent. If the definition of the content samples incorporates criteria such as importance, frequency, or criticality, these criteria should also be clearly explained and justified.

Evidence for Standard 1.1 should therefore justify adequate representation of the construct, specifically between the ReadBasix item pool and the *Common Core State Standards for English Language Arts in Grades 3-5* in terms of content, balance of content and cognitive complexity and address the depth and breadth of the content standards of Foundational Reading Skills and Language. Results support the argument that the ReadBasix item pool addresses these requirements for reading.

Procedurally, the study was designed and implemented to include relevant experts external to the test program itself. Standard 4.6 states:

When appropriate to documenting the validity of test score interpretations for intended uses, relevant experts external to testing program should review the test specifications to evaluate their

appropriateness for intended uses of the test scores... The purpose of the review, the process by which the review is conducted, and the results of the review should be documented. The qualifications, relevant experiences, and demographic characteristics of the expert judges should also be documented.

The study purpose, process, and results as well as the qualifications, experiences, and demographic characteristics of all expert reviewers are captured in this technical report (see Section 3).

Finally, Standard 12.4 states:

When a test is used as an indicator of achievement in an instructional domain or with respect to specified content standards, evidence of the extent to which the test samples the range of knowledge and elicits the processes reflected in the target domain should be provided. Both the tested and the target domains should be described in sufficient detail for their relationship to be evaluated. The analyses should make explicit those aspects of the target domain that the test represents, as well as those aspects that the test fails to represent.

The study provides evidence to support the claim that the ReadBasix item pool represents the *Common Core State Standards for English Language Arts* specific to Grades 3-5 Foundational Reading Standards and Language Standards, and to a lesser extent, to the Language Standards for Grades 6-12.



## **References**

- American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME) Joint Committee on Standards for Educational and Psychological Testing. (2014). *Standards for educational and psychological testing*. Washington DC: AERA.
- Forte, E. (2017). *Evaluating alignment in large-scale standards-based assessment systems* [White Paper]. Washington, DC: Council of Chief State School Officers.
- Webb, N.L. (2007). Issues related to judging the alignment of curriculum standards and assessments. *Measurement in Education* 20(1), 7-25. University of Wisconsin-Madison Wisconsin Center for Education Research, Wisconsin Center for Education Research: Lawrence Erlbaum Associates.

# Appendix

## Appendix A: Evaluation of Categorical Concurrence at the Standard Level

Table A. Evaluation of Categorical Concurrence at the Standard Level

Grade	Standard	Item Count	Alignment Evaluation
Reading – Informational			
3	RI.3	38	Strong
4	RI.4	38	Strong
5	RI.5	38	Strong
6	RI.6	35	Strong
7	RI.7	35	Strong
8	RI.8	35	Strong
9-10	RI.9-10	18	Strong
11-12	RI.11-12	18	Strong
Reading – Foundational Skills			
3	RF.3	82	Strong
4	RF.4	82	Strong
5	RF.5	82	Strong
Language			
3	L.3	91	Strong
4	L.4	91	Strong
5	L.5	91	Strong
6	L.6	172	Strong
7	L.7	172	Strong
8	L.8	172	Strong
9-10	L.9-10	199	Strong
11-12	L.11-12	199	Strong

**Appendix B: Evaluation of Categorical Concurrence at the Strand Level**

Table B. Evaluation of Categorical Concurrence at the Strand Level

Grade Level	Strand	Item Count	Alignment Evaluation	Strand	Item Count	Alignment Evaluation
<b>3</b>	RI.3.1	14	Strong	L.3.1	29	Strong
	RI.3.2	0	None	L.3.2	10	Strong
	RI.3.3	6	Strong	L.3.3	0	None
	RI.3.4	2	None	L.3.4	21	Strong
	RI.3.5	0	None	L.3.5	0	None
	RI.3.6	0	None	L.3.6	31	Strong
	RI.3.7	0	None	RF.3.3	41	Strong
	RI.3.9	0	None	RF.3.4	42	Strong
	RI.3.10	14	Strong			
<b>4</b>	RI.4.1	14	Strong	L.4.1	29	None
	RI.4.2	0	None	L.4.2	10	None
	RI.4.3	6	None	L.4.3	0	None
	RI.4.4	2	None	L.4.4	21	Strong
	RI.4.5	0	None	L.4.5	0	None
	RI.4.6	0	None	L.4.6	31	Strong
	RI.4.7	0	None	RF.4.3	41	Strong
	RI.4.9	0	None	RF.4.4	42	Strong
	RI.4.10	14	Strong			
<b>5</b>	RI.5.1	14	Strong	L.5.1	29	None
	RI.5.2	0	None	L.5.2	10	None
	RI.5.3	6	None	L.5.3	0	None
	RI.5.4	2	None	L.5.4	21	Strong
	RI.5.5	0	None	L.5.5	0	None

Grade Level	Strand	Item Count	Alignment Evaluation	Strand	Item Count	Alignment Evaluation
	RI.5.6	0	None	L.5.6	31	Strong
	RI.5.7	0	None	RF.5.3	41	Strong
	RI.5.9	0	None	RF.5.4	42	Strong
	RI.5.10	14	Strong			
<b>6</b>	RI.6.1	18	Strong	L.6.1	65	Strong
	RI.6.2	8	Strong	L.6.2	0	None
	RI.6.3	0	None	L.6.3	0	None
	RI.6.4	4	Weak	L.6.4	42	Strong
	RI.6.5	0	None	L.6.5	0	None
	RI.6.6	0	None	L.6.6	65	Strong
	RI.6.7	0	None			
	RI.6.9	0	None			
	RI.6.10	4	Weak			
<b>7</b>	RI.7.1	18	Strong	L.7.1	65	None
	RI.7.2	8	Strong	L.7.2	0	None
	RI.7.3	0	None	L.7.3	0	Strong
	RI.7.4	4	Weak	L.7.4	42	Strong
	RI.7.5	0	None	L.7.5	0	None
	RI.7.6	0	None	L.7.6	65	Strong
	RI.7.7	0	None			
	RI.7.9	0	None			
	RI.7.10	4	Weak			
<b>8</b>	RI.8.1	18	Strong	L.8.1	65	None
	RI.8.2	8	Strong	L.8.2	0	None
	RI.8.3	0	None	L.8.3	0	None

Grade Level	Strand	Item Count	Alignment Evaluation	Strand	Item Count	Alignment Evaluation
	RI.8.4	4	Weak	L.8.4	42	Strong
	RI.8.5	0	None	L.8.5	0	None
	RI.8.6	0	None	L.8.6	65	Strong
	RI.8.7	0	None			
	RI.8.9	0	None			
	RI.8.10	4	Weak			
<b>9- 10</b>	RI.9-10.1	8	Strong	L.9-10.1	0	None
	RI.9-10.2	5	Moderate	L.9-10.2	0	None
	RI.9-10.3	3	Weak	L.9-10.3	0	None
	RI.9-10.4	1	None	L.9-10.4	35	Strong
	RI.9-10.5	0	None	L.9-10.5	0	None
	RI.9-10.6	0	None	L.9-10.6	164	Strong
	RI.9-10.7	0	None			
	RI.9-10.9	0	None			
	RI.9-10.10	1	None			
	<b>11- 12</b>	RI.11-12.1	8	Strong	L.11-12.1	0
RI.11-12.2		5	Moderate	L.11-12.2	0	None
RI.11-12.3		3	Weak	L.11-12.3	0	None
RI.11-12.4		1	None	L.11-12.4	35	Strong
RI.11-12.5		0	None	L.11-12.5	0	None
RI.11-12.6		0	None	L.11-12.6	164	Strong
RI.11-12.7		0	None			
RI.11-12.9		0	None			
RI.11-12.10		1	None			

### Appendix C: Depth of Knowledge to Reading Standard

Table C. DOK to Reading Standard

Grade	Strand	Lowest DOK	Final Highest DOK	Target DOK
3	RI.3.1	1	2	2
	RI.3.2	1	3	2
	RI.3.3	2	3	2
	RI.3.4	2	2	2
	RI.3.5	1	2	2
	RI.3.6	2	3	2
	RI.3.7	1	2	2
	RI.3.8	2	3	2
	RI.3.9	2	3	3
	RI.3.10	1	3	2
	RL.3.1	1	2	2
	RL.3.2	2	3	3
	RL.3.3	1	3	2
	RL.3.4	2	2	2
	RL.3.5	1	2	2
	RL.3.6	1	2	2
	RL.3.7	1	3	2
	RL.3.9	2	3	3
	RL.3.10	1	3	2
	L.3.1	1	3	2
	L.3.2	1	3	2
	L.3.3	3	4	3
	L.3.4	1	3	2

Grade	Strand	Lowest DOK	Final Highest DOK	Target DOK
	L.3.5	2	3	2
	L.3.6	2	3	2
	RF.3.3	1	3	2
	RF.3.4	1	3	2
4	RI.4.1	1	2	2
	RI.4.2	2	3	2
	RI.4.3	1	3	2
	RI.4.4	2	2	2
	RI.4.5	1	3	2
	RI.4.6	2	3	3
	RI.4.7	1	3	2
	RI.4.8	2	3	2
	RI.4.9	2	4	3
	RI.4.10	1	3	2
	RL.4.1	1	2	2
	RL.4.2	2	3	2
	RL.4.3	1	3	2
	RL.4.4	2	2	2
	RL.4.5	1	3	2
	RL.4.6	2	3	2
	RL.4.7	1	3	2
	RL.4.9	2	4	3
	RL.4.10	1	3	2
	L.4.1	1	3	2
L.4.2	1	3	2	

Grade	Strand	Lowest DOK	Final Highest DOK	Target DOK
	L.4.3	3	4	3
	L.4.4	1	3	2
	L.4.5	2	3	2
	L.4.6	2	3	2
	RF.4.3	1	3	2
	RF.4.4	1	3	2
5	RI.5.1	1	3	2
	RI.5.2	2	3	2
	RI.5.3	1	3	2
	RI.5.4	2	2	2
	RI.5.5	2	4	3
	RI.5.6	2	4	3
	RI.5.7	2	4	2
	RI.5.8	2	3	2
	RI.5.9	2	4	3
	RI.5.10	1	3	2
	RL.5.1	1	3	2
	RL.5.2	2	3	2
	RL.5.3	2	3	2
	RL.5.4	2	3	2
	RL.5.5	2	3	2
	RL.5.6	2	3	3
	RL.5.7	2	3	3
	RL.5.9	2	4	3
	RL.5.10	1	3	2



Grade	Strand	Lowest DOK	Final Highest DOK	Target DOK
	L.5.1	1	3	2
	L.5.2	1	3	2
	L.5.3	3	4	3
	L.5.4	1	3	2
	L.5.5	2	3	2
	L.5.6	2	3	2
	RF.5.3	1	3	2
	RF.5.4	1	3	2
6	RI.6.1	1	3	2
	RI.6.2	2	3	2
	RI.6.3	2	3	3
	RI.6.4	2	3	2
	RI.6.5	2	3	3
	RI.6.6	2	3	3
	RI.6.7	2	4	3
	RI.6.8	2	3	3
	RI.6.9	2	4	3
	RI.6.10	1	3	3
	RL.6.1	1	3	2
	RL.6.2	2	3	2
	RL.6.3	2	3	2
	RL.6.4	2	3	3
	RL.6.5	2	3	3
	RL.6.6	2	3	3
	RL.6.7	2	4	3

Grade	Strand	Lowest DOK	Final Highest DOK	Target DOK
	RL.6.9	2	4	3
	RL.6.10	1	3	3
	L.6.1	1	3	2
	L.6.2	1	3	2
	L.6.3	3	4	3
	L.6.4	1	3	2
	L.6.5	2	3	2
	L.6.6	2	3	2
7	RI.7.1	1	3	2
	RI.7.2	2	3	3
	RI.7.3	2	3	3
	RI.7.4	2	3	2
	RI.7.5	2	3	3
	RI.7.6	2	3	3
	RI.7.7	2	4	3
	RI.7.8	2	3	3
	RI.7.9	3	4	4
	RI.7.10	1	3	3
	RL.7.1	1	3	2
	RL.7.2	2	3	3
	RL.7.3	2	3	2
	RL.7.4	2	3	2
	RL.7.5	2	3	3
	RL.7.6	2	3	3
	RL.7.7	2	4	3

Grade	Strand	Lowest DOK	Final Highest DOK	Target DOK
	RL.7.9	2	4	4
	RL.7.10	1	3	3
	L.7.1	1	3	2
	L.7.2	1	3	2
	L.7.3	3	4	3
	L.7.4	1	3	2
	L.7.5	2	3	2
	L.7.6	2	3	2
<b>8</b>	RI.8.1	1	3	2
	RI.8.2	2	3	3
	RI.8.3	2	3	3
	RI.8.4	2	3	2
	RI.8.5	2	3	3
	RI.8.6	2	3	3
	RI.8.7	2	3	3
	RI.8.8	2	3	3
	RI.8.9	3	4	4
	RI.8.10	1	3	3
	RL.8.1	1	3	2
	RL.8.2	2	3	3
	RL.8.3	2	3	3
	RL.8.4	2	3	2
	RL.8.5	2	4	3
	RL.8.6	2	3	3
	RL.8.7	2	4	3

Grade	Strand	Lowest DOK	Final Highest DOK	Target DOK
	RL.8.9	2	4	3
	RL.8.10	1	3	3
	L.8.1	1	3	2
	L.8.2	1	3	2
	L.8.3	3	4	3
	L.8.4	1	3	2
	L.8.5	2	3	2
	L.8.6	2	3	2
<b>9-10</b>	RI.9-10.1	1	3	2
	RI.9-10.2	2	3	3
	RI.9-10.3	2	3	3
	RI.9-10.4	2	3	2
	RI.9-10.5	2	3	3
	RI.9-10.6	2	3	3
	RI.9-10.7	2	3	3
	RI.9-10.8	2	3	3
	RI.9-10.9	3	4	4
	RI.9-10.10	1	3	3
	RL.9-10.1	1	3	2
	RL.9-10.2	2	3	3
	RL.9-10.3	2	3	3
	RL.9-10.4	2	3	2
	RL.9-10.5	2	4	3
	RL.9-10.6	2	3	3
	RL.9-10.7	2	4	3

Grade	Strand	Lowest DOK	Final Highest DOK	Target DOK
	RL.9-10.9	2	4	3
	RL.9-10.10	1	3	3
	L.9-10.1	1	3	2
	L.9-10.2	1	3	2
	L.9-10.3	3	4	3
	L.9-10.4	1	3	2
	L.9-10.5	2	3	2
	L.9-10.6	2	3	2
11-12	RI.11-12.1	1	3	2
	RI.11-12.2	2	3	3
	RI.11-12.3	2	3	3
	RI.11-12.4	2	3	2
	RI.11-12.5	2	3	3
	RI.11-12.6	2	3	3
	RI.11-12.7	2	3	3
	RI.11-12.8	2	3	3
	RI.11-12.9	3	4	4
	RI.11-12.10	1	3	3
	RL.11-12.1	1	3	2
	RL.11-12.2	2	3	3
	RL.11-12.3	2	3	3
	RL.11-12.4	2	3	2
	RL.11-12.5	2	4	3
	RL.11-12.6	2	3	3
	RL.11-12.7	2	4	3

*ReadBasix - Common Core Alignment*

<b>Grade</b>	<b>Strand</b>	<b>Lowest DOK</b>	<b>Final Highest DOK</b>	<b>Target DOK</b>
	RL.11-12.9	2	4	3
	RL.11-12.10	1	3	3
	L.11-12.1	1	3	2
	L.11-12.2	1	3	2
	L.11-12.3	3	4	3
	L.11-12.4	1	3	2
	L.11-12.5	2	3	2
	L.11-12.6	2	3	2

## Appendix D: Depth of Knowledge at the Standard Level

Table D. Evaluation of Depth of Knowledge at Standard Level–Reading-Informational

Grade Level	Standard	DOK Range	DOK 1	DOK 2	DOK 3	DOK 4	% At or Above DOK	Alignment Evaluation
Reading – Informational								
3	RI.3	DOK 1, 3	6	28	4	0	34.7%	Weak
4	RI.4	DOK 1, 4	6	28	4	0	76%	Weak
5	RI.5	DOK 1, 4	6	28	4	0	76%	Weak
6	RI.6	DOK 1, 4	17	9	9	0	38.9%	Weak
7	RI.7	DOK 1, 4	17	9	9	17	38.9%	Weak
8	RI.8	DOK 1, 4	17	9	9	17	38.9%	Weak
9-10	RI.9-10	DOK 1, 4	9	0	9	0	38%	Weak
11-12	RI.11-12	DOK 1, 4	9	0	9	0	38%	Weak
Reading – Foundational								
3	RF.3	DOK 1, 3	0	66	17	0	100%	Strong
4	RF.4	DOK 1, 3	0	66	17	0	100%	Strong
5	RF.5	DOK 1, 3	0	66	17	0	100%	Strong
Language								
3	L.3	DOK 1, 4	23	49	19	0	54%	Strong
4	L.4	DOK 1, 4	23	49	19	0	54%	Strong
5	L.5	DOK 1, 4	23	49	19	0	54%	Strong
6	L.6	DOK 1, 4	56	91	25	0	30.5%	Weak
7	L.7	DOK 1, 4	56	91	25	0	30.5%	Weak
8	L.8	DOK 1, 4	56	91	25	0	30.5%	Weak
9-10	L.9-10	DOK 1, 4	51	115	33	0	24%	None
11-12	L.11-12	DOK 1, 4	51	115	33	0	24%	None

### Appendix E: Depth of Knowledge at the Strand Level

Table E. Evaluation of Depth of Knowledge at the Strand Level–Reading-Informational Grade 3

Grade Level	Strand	DOK Range	Target DOK	DOK 1	DOK 2	DOK 3	DOK 4	% At or Above DOK	Alignment Evaluation
<b>Reading – Informational</b>									
<b>3</b>	RI.3.1	DOK 1, 2	2	4	10	0	0	71%	Strong
	RI.3.2	DOK 1, 3	2	0	0	0	0	0%	None
	RI.3.3	DOK 2, 3	2	1	5	0	0	83%	Strong
	RI.3.4	DOK 2, 2	2	0	1	1	0	100%	Strong
	RI.3.5	DOK 1,2	2	0	0	0	0	0%	None
	RI.3.6	DOK 2, 3	2	0	0	0	0	0%	None
	RI.3.7	DOK 1, 2	2	0	0	0	0	0%	None
	RI.3.8	DOK 2, 3	2	0	0	0	0	0%	None
	RI.3.9	DOK 2, 3	3	0	0	0	0	0%	None
	RI.3.10	DOK 1, 3	2	1	10	3	0	93%	Strong
<b>4</b>	RI.4.1	DOK 1, 2	2	4	10	0	0	71%	Strong
	RI.4.2	DOK 2, 3	2	0	0	0	0	0%	None
	RI.4.3	DOK 1, 3	2	1	5	0	0	83%	Strong
	RI.4.4	DOK 2, 2	2	0	1	1	0	100%	Strong
	RI.4.5	DOK 1, 3	2	0	0	0	0	0%	None
	RI.4.6	DOK 2, 3	3	0	0	0	0	0%	None
	RI.4.7	DOK 1, 3	2	0	0	0	0	0%	None
	RI.4.8	DOK 2, 3	2	0	0	0	0	0%	None
	RI.4.9	DOK 2, 4	3	0	0	0	0	0%	None
	RI.4.10	DOK 1, 3	2	1	10	3	0	93%	Strong
	RI.5.1	DOK 1, 3	2	4	10	0	0	71%	Strong



Grade Level	Strand	DOK Range	Target DOK	DOK 1	DOK 2	DOK 3	DOK 4	% At or Above DOK	Alignment Evaluation
5	RI.5.2	DOK 2, 3	2	0	0	0	0	0%	None
	RI.5.3	DOK 1, 3	2	1	5	0	0	83%	Strong
	RI.5.4	DOK 2, 2	2	0	1	1	0	100%	Strong
	RI.5.5	DOK 2, 4	3	0	0	0	0	0%	None
	RI.5.6	DOK 2, 4	3	0	0	0	0	0%	None
	RI.5.7	DOK 2, 4	2	0	0	0	0	0%	None
	RI.5.8	DOK 1, 3	2	0	0	0	0	0%	None
	RI.5.9	DOK 2, 4	3	0	0	0	0	0%	None
	RI.5.10	DOK 1, 3	2	1	10	3	0	93%	Strong
	6	RI.6.1	DOK 1, 3	2	17	1	0	0	5%
RI.6.2		DOK 2, 3	2	0	4	4	0	100%	Strong
RI.6.3		DOK 2, 3	3	0	0	0	0	0%	Strong
RI.6.4		DOK 2, 3	2	0	4	0	0	100%	Strong
RI.6.5		DOK 2, 3	3	0	0	0	0	0%	None
RI.6.6		DOK 2, 3	3	0	0	0	0	0%	None
RI.6.7		DOK 2, 4	3	0	0	0	0	0%	None
RI.6.8		DOK 2, 3	3	0	0	0	0	0%	None
RI.6.9		DOK 2, 4	3	0	0	0	0	0%	None
RI.6.10		DOK 1, 3	3	0	0	4	0	100%	Strong
7	RI.7.1	DOK 1, 3	2	17	1	0	0	5%	None
	RI.7.2	DOK 2, 3	3	0	4	4	0	100%	Strong
	RI.7.3	DOK 2, 3	3	0	0	0	0	0%	Strong
	RI.7.4	DOK 2, 3	2	0	4	0	0	100%	Strong
	RI.7.5	DOK 2, 3	3	0	0	0	0	0%	None
	RI.7.6	DOK 2, 3	3	0	0	0	0	0%	None

Grade Level	Strand	DOK Range	Target DOK	DOK 1	DOK 2	DOK 3	DOK 4	% At or Above DOK	Alignment Evaluation
	RI.7.7	DOK 2, 4	3	0	0	0	0	0%	None
	RI.7.8	DOK 2, 3	3	0	0	0	0	0%	None
	RI.7.9	DOK 3, 4	4	0	0	0	0	0%	None
	RI.7.10	DOK 1, 3	3	0	0	4	0	100%	Strong
<b>8</b>	RI.8.1	DOK 1, 3	2	17	1	0	0	5%	None
	RI.8.2	DOK 2, 3	3	0	4	4	0	100%	Strong
	RI.8.3	DOK 2, 3	3	0	0	0	0	0%	Strong
	RI.8.4	DOK 2, 3	2	0	4	0	0	100%	Strong
	RI.8.5	DOK 2, 3	3	0	0	0	0	0%	None
	RI.8.6	DOK 2, 3	3	0	0	0	0	0%	None
	RI.8.7	DOK 2, 3	3	0	0	0	0	0%	None
	RI.8.8	DOK 2, 3	3	0	0	0	0	0%	None
	RI.8.9	DOK 3, 4	4	0	0	0	0	0%	None
	RI.8.10	DOK 1, 3	3	0	0	4	0	100%	Strong
<b>9- 10</b>	RI.9-10.1	DOK 1, 3	2	8	0	0	0	0%	None
	RI.9-10.2	DOK 2, 3	3	1	0	4	0	80%	Strong
	RI.9-10.3	DOK 2, 3	3	0	0	3	0	100%	Strong
	RI.9-10.4	DOK 2, 3	2	0	0	1	0	100%	Strong
	RI.9-10.5	DOK 2, 3	3	0	0	0	0	0%	None
	RI.9-10.6	DOK 2, 3	3	0	0	0	0	0%	None
	RI.9-10.7	DOK 2, 3	3	0	0	0	0	0%	None
	RI.9-10.9	DOK 3, 4	4	0	0	0	0	0%	None
	RI.9-10.10	DOK 1, 3	3	0	0	1	0	100%	Strong
	<b>11- 12</b>	RI.11-12.1	DOK 1, 3	2	8	0	0	0	0%
RI.11-12.2		DOK 2, 3	3	1	0	4	0	80%	Strong

Grade Level	Strand	DOK Range	Target DOK	DOK 1	DOK 2	DOK 3	DOK 4	% At or Above DOK	Alignment Evaluation
	RI.11-12.3	DOK 2, 3	3	0	0	3	0	100%	Strong
	RI.11-12.4	DOK 2, 3	2	0	0	1	0	100%	Strong
	RI.11-12.5	DOK 2, 3	3	0	0	0	0	0%	None
	RI.11-12.6	DOK 2, 3	3	0	0	0	0	0%	None
	RI.11-12.7	DOK 2, 3	3	0	0	0	0	0%	None
	RI.11-12.9	DOK 3, 4	4	0	0	0	0	0%	None
	RI.11-12.10	DOK 1, 3	3	0	0	1	0	100%	Strong
<b>Reading - Foundational</b>									
<b>3</b>	RF.3.3	DOK 1, 3	2	0	33	8	0	100%	Strong
	RF.3.4	DOK 1, 3	2	0	33	9	0	100%	Strong
<b>4</b>	RF.4.3	DOK 1, 3	2	0	33	8	0	100%	Strong
	RF.4.4	DOK 1, 3	2	0	33	9	0	100%	Strong
<b>5</b>	RF.5.3	DOK 1, 3	2	0	33	8	0	100%	Strong
	RF.5.4	DOK 1, 3	2	0	33	9	0	100%	Strong
<b>Language</b>									
<b>3</b>	L.3.1	DOK 1, 3	2	2	23	4	0	93%	Strong
	L.3.2	DOK 1, 3	2	0	7	3	0	100%	Strong
	L.3.3	DOK 3, 4	3	0	0	0	0	0%	None
	L.3.4	DOK 1, 3	2	0	19	2	0	100%	Strong
	L.3.5	DOK 2, 3	2	0	0	0	0	0%	None
	L.3.6	DOK 2, 3	2	21	0	10	0	32%	Strong
<b>4</b>	L.4.1	DOK 1, 3	2	2	23	4	0	93%	Strong
	L.4.2	DOK 1, 3	2	0	7	3	0	100%	Strong
	L.4.3	DOK 3, 4	3	0	0	0	0	0%	None
	L.4.4	DOK 1, 3	2	0	19	2	0	100%	Strong

Grade Level	Strand	DOK Range	Target DOK	DOK 1	DOK 2	DOK 3	DOK 4	% At or Above DOK	Alignment Evaluation
	L.4.5	DOK 2, 3	2	0	0	0	0	0%	None
	L.4.6	DOK 2, 3	2	21	0	10	0	32%	Strong
5	L.5.1	DOK 1, 3	2	2	23	4	0	93%	Strong
	L.5.2	DOK 1, 3	2	0	7	3	0	100%	Strong
	L.5.3	DOK 3, 4	3	0	0	0	0	0%	None
	L.5.4	DOK 1, 3	2	0	19	2	0	100%	Strong
	L.5.5	DOK 2, 3	2	0	0	0	0	0%	None
	L.5.6	DOK 2, 3	2	21	0	10	0	32%	Strong
6	L.6.1	DOK 1, 3	2	21	43	1	0	68%	Strong
	L.6.2	DOK 1, 3	2	0	0	0	0	0%	None
	L.6.3	DOK 3, 4	3	0	0	0	0	0%	None
	L.6.4	DOK 1, 3	2	5	35	2	0	88%	Strong
	L.6.5	DOK 2, 3	2	0	0	0	0	0%	None
	L.6.6	DOK 2, 3	2	30	13	22	0	64%	Strong
7	L.7.1	DOK 1, 3	2	21	43	1	0	68%	Strong
	L.7.2	DOK 1, 3	2	0	0	0	0	0%	None
	L.7.3	DOK 3, 4	3	0	0	0	0	0%	None
	L.7.4	DOK 1, 3	2	5	35	2	0	88%	Strong
	L.7.5	DOK 2, 3	2	0	0	0	0	0%	None
	L.7.6	DOK 2, 3	2	30	13	22	0	64%	Strong
8	L.8.1	DOK 1, 3	2	21	43	1	0	68%	Strong
	L.8.2	DOK 1, 3	2	0	0	0	0	0%	None
	L.8.3	DOK 3, 4	3	0	0	0	0	0%	None
	L.8.4	DOK 1, 3	2	5	35	2	0	88%	Strong
	L.8.5	DOK 2, 3	2	0	0	0	0	0%	None

Grade Level	Strand	DOK Range	Target DOK	DOK 1	DOK 2	DOK 3	DOK 4	% At or Above DOK	Alignment Evaluation
	L.8.6	DOK 2, 3	2	30	13	22	0	64%	Strong
<b>9 - 10</b>	L.9-10.1	DOK 1, 3	2	0	0	0	0	0%	None
	L.9-10.2	DOK 1, 3	2	0	0	0	0	0%	None
	L.9-10.3	DOK 3, 4	3	0	0	0	0	0%	None
	L.9-10.4	DOK 1, 3	2	10	12	13	0	71%	Strong
	L.9-10.5	DOK 2, 3	2	0	0	0	0	0%	None
	L.9-10.6	DOK 2, 3	2	41	103	20	0	75%	Strong
<b>11- 12</b>	L.11-12.1	DOK 1, 3	2	0	0	0	0	0%	None
	L.11-12.2	DOK 1, 3	2	0	0	0	0	0%	None
	L.11-12.3	DOK 3, 4	3	0	0	0	0	0%	None
	L.11-12.4	DOK 1, 3	2	10	12	13	0	71%	Strong
	L.11-12.5	DOK 2, 3	2	0	0	0	0	0%	None
	L.11-12.6	DOK 2, 3	2	41	103	20	0	75%	Strong

## Appendix F: Evaluation of Balance of Knowledge

Table F. Evaluation of Balance of Knowledge

Grade Level	Standard	Balance of Knowledge	Alignment Evaluation
Reading – Informational			
3	RI.3	0.34	None
4	RI.4	0.34	None
5	RI.5	0.34	None
6	RI.6	0.34	None
7	RI.7	0.34	None
8	RI.8	0.34	None
9-10	RI.9-10	0.50	None
11-12	RI.11-12	0.50	None
Reading – Foundational			
3	RF.3	0.83	Strong
4	RF.4	0.83	Strong
5	RF.5	0.83	Strong
Language			
3	L.3	0.79	Strong
4	L.4	0.79	Strong
5	L.5	0.79	Strong
6	L.6	0.62	Moderate
7	L.7	0.62	Moderate
8	L.8	0.62	Moderate
9-10	L.9-10	0.19	None
11-12	L.11-12	0.19	None

## Appendix G: Evaluation of Range of Knowledge

Table G. Evaluation of Range of Knowledge

Grade Level	Standard	Standards Count	Count of Strands Measured By >1 Item	Range of Knowledge	Alignment Evaluation
Reading – Informational					
3	RI.3	10	4	40%	Moderate
4	RI.4	10	4	40%	Moderate
5	RI.5	10	4	40%	Moderate
6	RI.6	10	4	40%	Moderate
7	RI.7	10	4	40%	Moderate
8	RI.8	10	4	40%	Moderate
9-10	RI.9-10	10	4	40%	Moderate
11-12	RI.11-12	10	4	40%	Moderate
Reading – Foundational					
3	RF.3	2	2	100%	Strong
4	RF.4	2	2	100%	Strong
5	RF.5	2	2	100%	Strong
Language					
3	L.3	6	4	67%	Strong
4	L.4	6	4	67%	Strong
5	L.5	6	4	67%	Strong
6	L.6	6	3	50%	Moderate
7	L.7	6	3	50%	Moderate
8	L.8	6	3	50%	Moderate
9-10	L.9-10	6	2	34%	None
11-12	L.11-12	6	2	34%	None