

DEVELOPMENT OF LEARNING TODAY
COMPUTER ADAPTIVE TESTS

An Application of the Four Building Blocks Approach to Test Development

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Richard S. Brown, Ph.D.

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Table of Contents

Learning Today Computer Adaptive Tests	3
Introduction	3
Measurement Construction	3
The Four Building Blocks Approach.....	3
The Construct Maps	4
Items Design.....	5
Outcome Space.....	5
Measurement Model.....	6
CAT Design	6
Test flow – Reading Test	6
Test Flow – Mathematics Test	7
Item Selection	7
Stopping Rules.....	7
Pilot Testing	7
Forms Development.....	7
Pilot Sample	8
Calibration	8
Wright Maps	8
Test Information Curves.....	12
Item Characteristic Curves	13
Misfit Measures	15
Scoring.....	15
Placement.....	16
Validity Evidence.....	18
Test Content.....	18
Response Processes.....	18
Internal Structure	18
Relations to Other Measures	20
Consequences of Use	20
Reliability Evidence	20
Standard Errors of Measurement and Separation Indices.....	21
Future Investigations.....	21
References.....	22
Construct Maps for Mathematics.....	23
Construct Maps for Reading/Phonics	38
Learning Today Assessment Flowcharts.....	85
Learning Today Adaptive Assessment Scoring Algorithms.....	89
Learning Today Assessment Sample Items	90

Learning Today Computer Adaptive Tests

Introduction

The Learning Today Adaptive Assessments are computer delivered, adaptive assessments in Reading, Phonics, and Mathematics for students in kindergarten through elementary grades. These assessments were developed to serve several purposes. The first purpose is to establish a metric that will allow for an accurate assessment of student knowledge which can be monitored over a period of time to gauge student improvement. A second purpose is to link the assessment results to student placement decisions into Learning Today's instructional curricula. Initial development of these assessments began in March, 2007 and continues in an on-going process to refine, enhance, and improve the assessments. This document briefly details the conceptual approach driving the development process and presents statistical results from initial calibration samples to demonstrate the psychometric soundness of the assessment instruments.

Measurement Construction

The Four Building Blocks Approach

The National Research Council argues that assessments should be based on the best available understanding of how students represent knowledge and how they develop competency in the domain of interest, thus necessitating an understanding of the way the construct of interest proceeds (National Research Council, 2001). Mark Wilson, a leading expert in the field of measurement and assessment, has outlined a process for the development of measures or assessments. This process requires careful consideration of the nature and purpose of the assessments and detailed attention to articulating how students progress along the construct as they develop increasing levels of competency. The Wilsonian approach includes four building blocks; the construct map, the items design, the outcome space, and the measurement model. For a detailed description of each of these stages, the reader is referred to Wilson's 2005 book entitled, *Constructing Measures*. In this report, each of these stages and their application to the development of the Learning Today Adaptive Assessments will be presented. These tests were developed to provide a flexible, adaptive means of assessing student knowledge in Mathematics, Reading, and Phonics for Kindergarten through fifth grade.

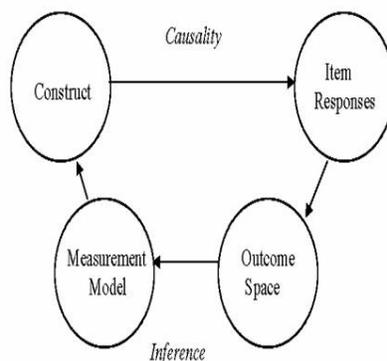


Figure 1. The Four Building Blocks of Assessment Development from Wilson (2005).

The Construct Maps

A construct map is a graphical representation of how a construct develops. In order to develop an assessment measuring a given construct, it is important to understand how that construct develops as a continuum. The most important thing is that the construct is defined coherently and substantively and that the construct is composed of a single underlying continuum (see Figure 2 below for a generic example of a construct map). Generating construct maps serves as a basis of test development as it requires a thorough articulation of what represents various stages along the progression of the construct. It also enables the test developer to specify the types of things that would indicate a respondent is at different points along the continuum. As a result, the construct map can be used to detail the test elements and serves as a guide to item writing. The construct map must be informed by theory and knowledge of the domain, yet can be similarly informative when modified to accord with empirical findings. For these tests, three construct maps were developed by subject matter experts based on their knowledge, collections of state standards documents, and research in the field, one each for Reading, Phonics, and Mathematics. These maps went through numerous reviews and revisions until the forms used for item development were determined. Copies of each of these maps are provided in the Appendix.

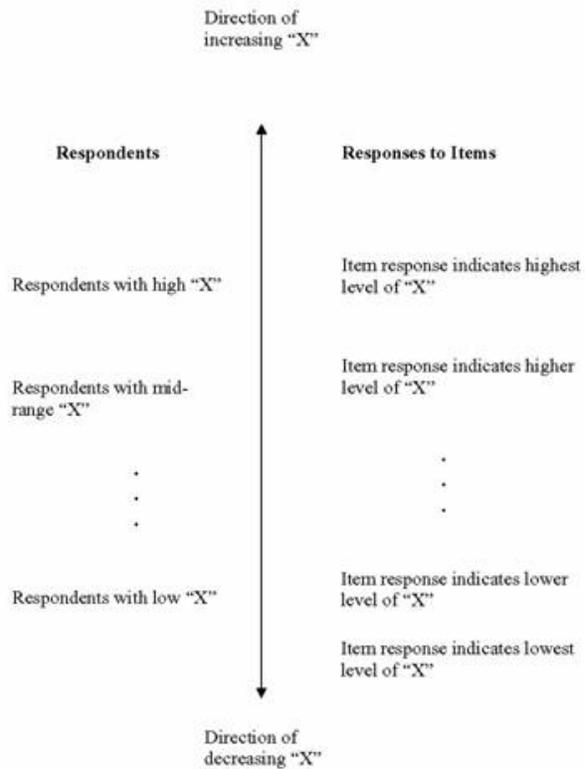


Figure 2. Sample Generic Construct Map

Items Design

The items design specifies the types and nature of items to be used in the assessment. The item formats could include any number of approaches, including multiple choice, short answer, or performance type items. In the case of the Learning Today Adaptive Assessments, all items utilize a multiple choice format. In addition, other features make the items more appropriate for the target populations. For example, for items addressing pre-reading skills, sound is provided to assist pre-reading youngsters with item response selection. Samples of items for both math and reading are available in the Appendix to this document. Items were developed by subject matter experts specifically to target the skills and abilities articulated in the construct maps.

The item development process also incorporates an item paneling procedure. In this procedure, additional subject matter experts are brought together to review initial items and the construct map as an Item Panel. This panel collaboratively and critically reviews the items and offers recommendations for revision. The aim of the Item Panel is to help each panelist contribute in the most constructive way possible to creating the best set of items that well represent the framework. Panelists are to be as critical as they can, but with the aim of being constructive as well.

As part of the item paneling process, for each item, the development team must describe the item's relationship to the framework, justify that the item is appropriately expressed for the respondents, show that the item is likely to generate the sort of information desired, and indicate that the sorts of responses the item elicits can be scored using a scoring guide. For the panelists, it is important that they understand the framework, along with suitable background information, understand how the instrument will be administered and scored, and recognize what part of the framework each item relates to and how it will be scored.

During the course of the paneling procedure, the item development team explains the purpose of the panel in case some panelists are new to the procedure, gives panelists a brief overview of the framework of the construct and context of the planned instrument, including the expected respondents. The team also invites comments and questions from the panelists and they systematically discuss the items to be paneled. After the panelists have reviewed the items, the development team reviews the meeting notes to be clear about recommended actions for each item. Any matters that were not clear in the meeting notes are followed-up and clarified.

All six reading panelists had elementary classroom teaching experience with a specialization in reading. One was an Exceptional Student Education (ESE) specialist. One was an English Language Learner (ELL) specialist. Four were from Broward County (2nd largest school district in Florida and 6th largest in the country), and two from Miami-Dade County (largest school district in Florida and the 4th largest school district in the United States). Similarly, all seven mathematics panelists had elementary classroom teaching experience. One was an ESE specialist. One was an ELL specialist. Four were from Broward County and three were from Miami-Dade County.

Outcome Space

The outcome space for an item or a collection of items refers to a procedure for classifying or categorizing results. In a multiple choice items design, this reduces to the response options presented with each item. Categories in the outcome space should be well-defined, finite and exhaustive, ordered, context-specific, and research based. In these tests, all items have a well-defined outcome space in that all items have a single correct answer based on research and knowledge of the domain assessed. The categories (right/wrong) are finite and exhaustive, possess a definite order, and are specific to each item.

Measurement Model

Our approach in developing these assessments was to employ item response theory rather than classical test theory to enhance the adaptive efficiency and information value of the assessments (see Wright & Stone, 1979). The measurement model selected for these assessments is commonly known as the “Rasch” model so named after the Danish mathematician Georg Rasch who popularized it in the early 1960’s (Rasch, 1960). The Rasch model has certain advantages over other models. The Rasch model provides “the necessary objectivity for the construction of a scale that is separable from the distribution of the attribute in the person it measures” (Bond & Fox, 2001, p.7). That is, the Rasch model provides sample-free item difficulty estimates and item-free person ability estimates. These researchers further state, “When we analyze our data using a Rasch model, we get an estimate of what our construct might be like if we were to create a ruler to measure it. The Rasch model provides us with useful approximations of measures that help us understand the processes underlying the reasons why people hand items behave in a particular way” (Bond & Fox, 2001, p. 8). The Rasch model provides a mechanism to generate an interval level scale with the fundamental measurement requirements of specific objectivity and additivity.

CAT Design

These tests are computer adaptive, meaning the items presented to each student vary depending upon how the student responds to the previous items presented. Thus, the items can target the estimated student ability better and more information is obtained from each item presented. This section will describe the adaptive nature of the tests and how the item selection process works. The flowcharts presented in the Appendix are recommended as a useful reference while reviewing the narrative description below.

Test flow – Reading Test

When the user begins the test, (indicated by the “Start” node on the Item Determination Flowchart – Section A) the program will first determine if the user has taken the test in the past 12 months. If the user has, then the value of the estimated student ability will be set to the student’s previous estimated ability on the assessment. If not, the average, or mean, of the difficulty levels for all of the items in the student’s assigned grade will be used to calculate the initial estimated student ability.

The first 5 test items presented to the user will be embedded items that will not be used in score estimation. Rather, these items are trial items that will be calibrated to the scale at a later time to enhance the item pools. The sixth item presented to the user is the first item of the computer adaptive test (CAT). This item should have a difficulty level one grade below the student’s estimated ability level or assigned grade, as determined previously.

Which items students are presented vary by grade. The test addresses several skill areas in reading, including Phonemic Awareness, Phonics, Sight Words, Reading Comprehension, and Vocabulary. All students, regardless of grade, are first administered 12 phonics items. Students in Kindergarten through 3rd grade will then be presented with Phonemic Awareness items, while students in grades 4 and 5 will be presented with the first of the Reading Comprehension items. Reading comprehension items are split into two sections, with approximately half of the items presented in each one. There are two types of RC items, stand-alone, single items and items associated with a passage or support graphic – these are contained together in a testlet, or collection of items. The term “component” is used to refer to both single RC items and multiple RC items contained in a testlet. The rules for determining how many RC items to present in the first RC section are as follows. For Grades K – 3, after each component is presented, determine if a minimum of 4 items has been presented. If yes, move on to the next section of the test. If not, present the next component. If the next component is a testlet, present items until a total maximum of 6 RC items has been reached. For grades 4 – 5, after each component is presented, a determination is made whether a minimum of 6 RC items has been presented. If yes, the students progresses to the next section of the test. If not, the next RC component is presented. If the next component is a testlet, items are presented until a total maximum of 9 RC items has been reached.

Test Flow – Mathematics Test

The test flow for the mathematics assessment is very similar to the test flow for the reading assessment. The difference is in the number of skills assessed. In mathematics, the three skills include Numbers and Operations, Measurement, and Geometry. First, items addressing Numbers and Operations are presented, followed by items focusing on Measurement. Item measuring Geometry concepts are presented last in the mathematics assessment.

Item Selection

After each item, the student's estimated ability is re-calculated and updated (see Appendix for the formulas). The student's new estimated ability is used to find the next best item to present. The next best item is the one with the specified content requirements in the item pool with a difficulty level that most closely matches that of the student's estimated ability. The item difficulty estimates for items in the initial item pool are determined during the calibration phase, which will be discussed later. Subsequent item difficulty estimates will be generated as part of the item embedding process.

The rules for determining the selection of an item from the database include:

- Item must be in the correct skill area
- Item must not have been presented to the user during this test session
- The difficulty level of the item should be closest to the student's current estimated ability level.
- If a Reading Comprehension testlet has been selected, all of the items contained in that testlet will be presented.

For selection purposes, the difficulty level of a Reading Comprehension testlet will be the average value of the difficulty estimates for the items contained within the testlet. The assessment application reviews the Reading Comprehension testlets and single items to determine which has a difficulty level closest to the student's current estimated ability level. If a Reading Comprehension testlet is chosen, the program presents the item within the testlet that is closest in difficulty level to the student's current estimated ability level.

Stopping Rules

The primary stopping rules for this computer adaptive assessment are based on minimum and maximum numbers of items to be presented with in each skill area and a maximum number of items for the entire test. For Grades K-3 the total number of items for the Reading test is 40. For Grades 4-5, the total number of items presented is 42. For Kindergarten only, there is a secondary stopping rule: items from each skill area will be presented until the standard error threshold of .4 logits has been reached.

Pilot Testing

Pilot testing for these assessments took place during the Summer of 2007 at several Florida elementary schools. In all, 619 kindergarten through fifth grade students participated in the mathematics pilot and 660 participated in the reading and phonics pilot.

Forms Development

Six test forms, one for each of grades Kindergarten through Grade Five, were developed for each subject area for initial calibration. Each test form shared common items with the test form for the adjacent grades. This feature of test form development was necessary to allow for scale development and linking across grades. For each test form, items were selected that addressed the content material targeting that grade level based on state standards documents and the previously developed construct maps. Items were also selected to ensure content coverage of each of the sub-domains which included Phonics, Phonemic Awareness, Sight Words, Reading Comprehension, and Vocabulary for the Reading test and Numbers and Operations, Measurement, and Geometry for the Mathematics test.

Grade Level of Test Form	K	1	2	3	4	5
Total Items on Test Form	40	45	45	45	45	45
Unique Items	30	25	25	25	25	35
Items shared with prior grade	0	10	10	10	10	10
Items shared with later grade	10	10	10	10	10	0

Table 1. Pilot test forms development procedure

Pilot Sample

The pilot samples for these tests were comprised of students in the state of Florida. More than 600 students in grades Kindergarten through Grade Five were administered the exams in the pilot testing phase. The demographic breakdown was primarily Hispanic with approximately 69% in the Math sample and approximately 66% in the Reading sample. African American students comprised between 19% (Math) and 23.5% (Reading) of the sample. The remaining students were of White, non-Hispanic ethnicity. These ethnic percentages are consistent with the target populations for the instruments. Approximately 100 students per each of the six grade levels were assessed in Math and Reading. The Phonics scale was derived from the Reading test sample. Not all students took both the Math and Reading tests, but there was substantial overlap between the two samples.

Calibration

The process of calibration requires applying the Rasch measurement model to set of data and concurrently estimating person and item parameters. Responses from the pilot testing sessions were calibrated to the designated scales using the Winsteps Rasch modeling computer software program (Linacre, 2006). Due to the presence of common items across adjacent grades, all items within each domain were calibrated to a single scale across grades, resulting in separate scales for Reading, Phonics, and Mathematics. The calibration process generates much useful information for evaluating and developing instruments, including sample-free item difficulty estimates, Wright Maps, test and item curves, misfit and reliability statistics, and student ability or score estimates. The results of the calibration for the Learning Today tests will be reviewed regarding each of these informational components.

Wright Maps

A Wright Map is a graphical representation linking the item difficulties and student ability estimates on the common scale. This representation is named in honor of Benjamin Wright, a critically influential psychometrician from the University of Chicago who popularized Rasch modeling and item response measurement in the United States. From the Wright Map, one can see many things, including the distribution of item difficulties, distribution of student ability estimates, and how well the item difficulty distributions match the student ability estimates. For a test to be maximally informative, the items should target where the student abilities lie. In the Wright Maps below, it is clear that the item difficulty and student ability distributions are well matched for both Reading (Figure 3) and Mathematics (Figure 5), and both show much variability in both item difficulties and student ability estimates. For the Phonics scale, however, many of the student ability estimates are clustered above the range of item difficulties. These students, typically fourth and fifth graders, are estimated beyond the range of Phonics ability that can be best measured with the Phonics items on this scale. This result is not unexpected, as the items on the Phonics scale are designed to measure lower level skills generally at the third grade level and below.

READING

PERSONS MAP OF ITEMS

640	.	+						
630	.	+						
620	.	+						
610	.	+						
600	#	T+						
590	.#	+	VC_L6_2					
580	.	+T						
570	.###	+	RC_L4_2	RC_L4_3	RC_L4_4	RC_L6_12	RC_L6_8	
			VC_L5_2					
560	.###	+	RC_L5_7	RC_L5_8	RC_L6_7	VC_L5_4		
550	.#####	+	RC_L6_10					
540	.###	+	RC_L5_1	RC_L5_10	VC_L3_5	VC_L4_5		
530	.###	+	RC_L5_3	VC_L6_1	VC_L7_1			
520	#####	S+	P_L3_12	RC_L2_8	RC_L4_1	RC_L5_12	RC_L5_5	
			RC_L5_6	RC_L5_9	RC_L6_11	VC_L5_3		
510	.#####	+	RC_L2_2	RC_L5_2				
500	.#####	+	P_L3_10	RC_L3_2	RC_L3_3			
490	.#####	+S	RC_L5_11	RC_L5_4	VC_L4_4	VC_L5_5		
480	.#####	+	P_L3_11	RC_L2_1	RC_L2_3	RC_L2_5	RC_L2_7	
			RC_L3_6	RC_L4_5	VC_L3_4			
470	.#####	+	RC_L2_4	RC_L2_6	RC_L2_9	RC_L3_1	RC_L3_5	
			RC_L4_8	VC_L3_2	VC_L3_6	VC_L5_6		
460	#####	+	P_L3_9	RC_L4_7	VC_L2_1	VC_L4_1		
450	#####	+	P_L1_5	RC_L3_4	RC_L4_6	VC_L1_6	VC_L2_5	
			VC_L4_3					
440	.#####	M+	RC_L1_1					
430	.#####	+	VC_L2_4	VC_L2_6	VC_L4_2	VC_L4_6	VC_L5_1	
420	.#####	+	P_L2_2					
410	.#####	+	PA_L1_5	P_L2_1	RC_L1_2			
400	.#####	+M	PA_LK_1	PA_LK_6	P_L2_3	P_L2_7	VC_L2_2	
			VC_L2_3	VC_L3_3				
390	.#####	+	P_L2_9	RC_L1_8	VC_L1_4	VC_L3_1		
380	.#####	+	PA_LK_5	P_L1_11	P_L2_5	RC_L1_3	RC_L1_7	
			SW_L1_5					
370	.#####	+	P_L1_12	P_L1_8	P_L3_4	P_LK_8	RC_L1_6	
			RC_LK_3	SW_LK_3				
360	.#####	S+	PA_L1_2	PA_LK_2	P_L1_13	P_L2_8	P_L3_3	
			P_LK_9	SW_L2_2	SW_LK_1			
350	#####	+	PA_L1_6	P_L1_4	RC_L1_5	RC_LK_9	SW_L2_3	
			SW_L3_7	SW_LK_2				
340	.#####	+	PA_LK_3	PA_LK_4	P_L1_6	P_L1_9	P_L2_6	
			P_LK_10	RC_L1_4	RC_LK_1	RC_LK_4	SW_L2_6	
			SW_L3_5	SW_LK_4				
330	#####	+	PA_L1_3	PA_L1_4	P_L1_3	P_L1_7	P_L2_12	
			P_LK_11	P_LK_12	P_LK_13	P_LK_6	SW_LK_5	
			VC_L1_5					
320	###	+	P_L1_10	P_LK_7	RC_LK_5	RC_LK_6	SW_L1_4	
			SW_L1_6	SW_L2_4	SW_L2_5	SW_LK_6	VC_LK_2	
310	###	+S	P_L2_10	P_L3_1	P_L3_2	P_L3_8	RC_LK_2	
			SW_L1_1	SW_L1_3	SW_L3_4			
300	.##	+	P_L2_11	P_L2_4	P_L3_6	SW_L3_2	SW_L3_6	
			VC_L1_1	VC_L1_2				
290	.	+	P_L3_7	P_LK_5	RC_LK_8	SW_L2_1	VC_LK_1	
			VC_LK_3	VC_LK_4	VC_LK_5	VC_LK_6		
280	.	T+	P_L1_2	SW_L3_1	SW_L3_3			
270	.	+	P_L3_5	P_LK_1				
260	.	+	P_LK_2	P_LK_4	RC_LK_7			
250	.	+	P_LK_3					

EACH '#' IS 4.

Figure 3. Wright Map for Reading

PHONICS

PERSONS MAP OF ITEMS

670	#####	+								
660	.#####	+								
650		+								
640		+	P_L3_12							
630		+								
620		+	P_L3_10							
610	#####	+								
600		S+								
590		+	P_L3_11							
580		+								
570	#####	+								
560	.#####	+T	P_L3_9							
550		+								
540	###	+								
530	.####	+								
520	##	+								
510	.#	+								
500	.#	+	P_L1_5							
490	.###	M+	P_L2_2							
480	#	+S	P_L2_1	P_L2_7						
470	.####	+	P_L2_3							
460	.#	+	P_L2_9							
450	.	+	P_L3_4							
440	####	+	P_L2_5	P_L2_8	P_L3_3					
430	.##	+	P_L1_11							
420	.####	+	P_L1_12							
410	##	+								
400	####	+M	P_L1_8	P_L2_12	P_L2_6	P_LK_8				
390	.	+	P_L1_13							
380	.#####	S+	P_L1_4	P_L1_9	P_L3_2	P_L3_8	P_LK_9			
370	.#	+	P_L1_6	P_L2_10	P_L3_1	P_L3_6	P_LK_10			
360	##	+	P_L1_10	P_L1_3	P_L1_7	P_L2_11	P_L2_4	P_L3_7		
			P_LK_13							
350	.#	+	P_LK_11	P_LK_12	P_LK_6					
340	.###	+	P_LK_7							
330	.	+	P_L3_5							
320	.#	+S								
310	.#	+	P_L1_2	P_LK_5						
300	.#	+								
290		+								
280	.#	+	P_LK_1							
270		T+	P_LK_2	P_LK_4						
260	.	+	P_LK_3							
250		+								
240	.	+T								
230		+								
220		+								
210		+								
200		+								
190	.	+								

EACH '#' IS 6.

Figure 4. Wright Map for Phonics

MATH

PERSONS MAP OF ITEMS

580	.	+							
570	.	+							
560		+							
550		+	A_L3_9						
540		+	B_L3_128						
530		+	B_L5_217						
520	.	+	A_L5_103						
510	.	+T	A_L5_96	B_L4_144	C_L5_216				
500	#	+	A_L4_86						
490	.#	T+	A_L4_88	A_L5_13	B_L4_142	B_L5_161	B_L5_162		
			C_L5_24						
480	.#	+	A_L3_73	A_L4_87	A_L5_104	A_L5_12	B_L3_132		
			B_L5_147	B_L5_156	C_L4_208				
470	.###	+	A_L3_68	A_L3_70	A_L4_11	A_L5_105	A_L5_97		
460	.#####	+S	A_L2_51	B_L4_17	B_L5_155	B_L5_157	B_L5_163		
			C_L2_190	C_L5_212	C_L5_213				
450	.#####	+	A_L3_79	A_L4_90	A_L4_92	A_L5_102	A_LK_32		
			B_L2_123	B_L4_16	C_L3_195	C_L4_206			
440	.#####	S+	A_L2_8	A_L3_80	A_L4_93	A_L5_99	B_L3_127		
			B_L3_130	B_L4_146	B_L5_148	B_L5_158	B_L5_165		
			C_L4_23	C_L5_218					
430	.#####	+	A_L1_44	A_L1_48	A_L2_52	A_L2_57	A_L3_72		
			A_L3_81	A_L3_83	A_L4_96	B_L3_131	B_L3_137		
			B_L5_154	B_L5_160	B_L5_164	C_L1_182	C_L2_191		
			C_L2_192	C_L4_205					
420	.#####	+	A_L1_222	A_L2_53	A_L2_54	A_L3_71	A_L4_94		
			A_L5_100	A_L5_106	A_L5_98	B_L3_134	B_L3_135		
			B_L5_150	C_L4_207	C_L5_210	C_L5_211			
410	.#####	+	A_L2_61	A_L2_64	A_L4_84	A_L4_91	A_L5_101		
			A_LK_26	B_L1_113	B_L4_141	B_L4_145	B_L5_149		
			B_L5_152	B_L5_153	B_L5_159	B_LK_117	C_L3_197		
			C_L3_199	C_L3_22					
400	.#####	M+M	A_L1_4	A_L2_55	A_L2_59	A_L2_62	A_L2_63		
			A_L4_10	A_L4_95	B_L1_114	B_L1_115	B_L2_119		
			B_L2_124	B_L2_125	B_L3_129	B_L4_140	B_L4_143		
			B_L4_15	C_L2_188	C_L2_189	C_L3_196	C_L4_202		
			C_L4_203	C_L4_204	C_L5_214				
390	.#####	+	A_L1_42	A_L1_45	A_L1_5	A_L2_56	A_L2_60		
			A_L3_75	A_L3_76	B_L1_117	B_LK_108	C_L4_201		
380	.#####	+	A_L1_36	A_L2_65	A_L3_77	A_LK_27	B_LK_109		
			C_L5_209						
370	.#####	+	A_L1_37	A_L1_39	A_L1_41	A_L3_67	A_L3_74		
			A_L3_78	A_L3_82	A_LK_28	A_LK_29	A_LK_30		
			A_LK_31	B_L2_14	B_L3_138	C_L1_187	C_L5_215		
			C_LK_19						
360	.#####	+	A_L1_35	A_L1_38	A_L1_46	A_L1_47	A_L2_7		
			A_L3_69	A_LK_2	B_L1_116	C_L1_185	C_L5_219		
350	.#####	S+	A_L1_40	A_L1_43	A_L2_58	B_L2_118	B_L2_120		
			B_L2_122	B_L2_126	B_L5_166	B_LK_112	C_L4_200		
			C_LK_177						
340	.#####	+S	A_L4_85	A_L4_89	B_L3_136	B_L5_151	C_L1_179		
			C_L1_180						
330	.#####	+	A_L1_50	B_L2_121	C_L1_181	C_L1_183	C_L1_184		
			C_L1_20	C_L2_193	C_L2_194	C_L2_21	C_L3_198		
			C_LK_172	C_LK_178					
320	.##	+	B_LK_111						
310	.###	+	A_L1_49	A_LK_1	C_L1_186	C_LK_170	C_LK_171		
300	.	T+	A_LK_33	A_LK_34	B_LK_107	C_LK_176			
290	.	+T	A_LK_220						
280	.	+	B_L3_133	C_LK_173	C_LK_175				
270		+	C_LK_174						
260		+	B_LK_110						
250		+	C_LK_169						
240		+							
230		+							
220	.	+	C_LK_168						

EACH '#' IS 5.

Figure 5. Wright Map for Mathematics

Test Information Curves

Test information curves provide graphical representations of the amount of information the test provides across the ability continuum. From this representation, one can see the degree of information for a given ability level as well as how well the test provides information across a range of abilities. As can be seen from the below images, the Learning Today tests provide substantial information across the full range of abilities assessed, with the most information estimated to be at the mid-range of ability distributions for the calibration sample.

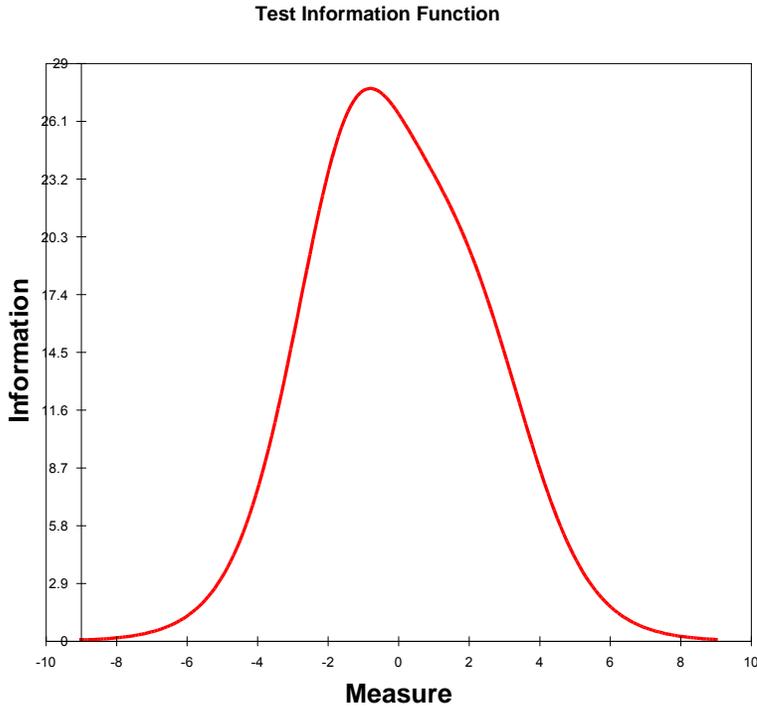


Figure 6. Reading Test Information Function

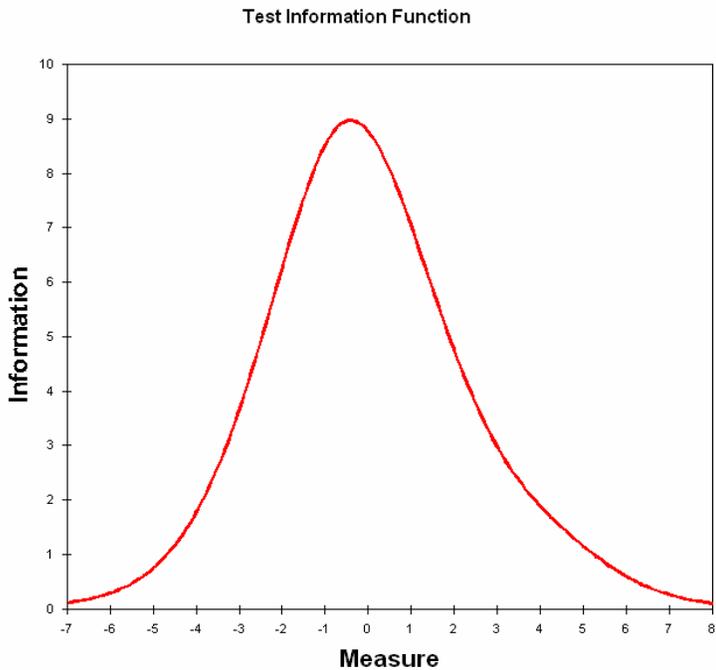


Figure 7. Phonics Test Information Function

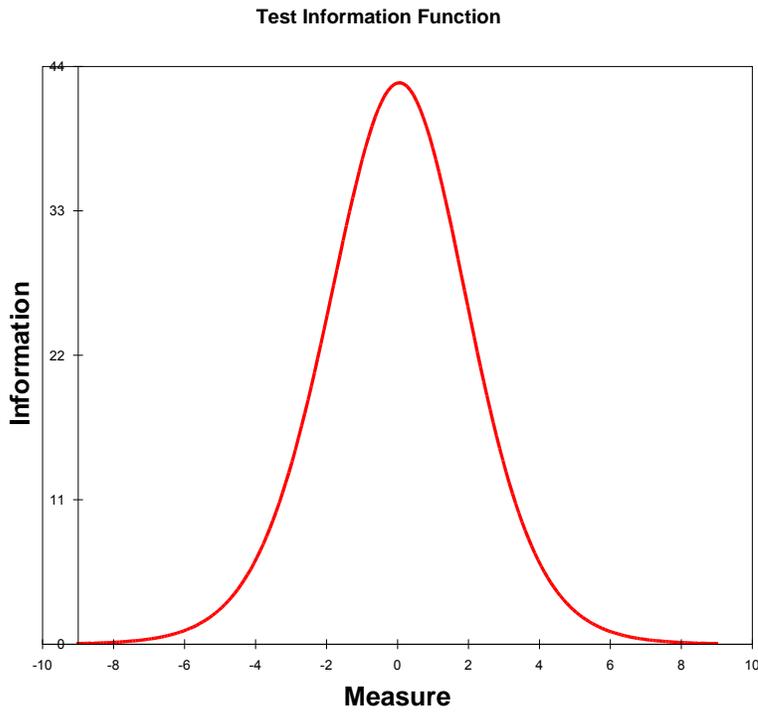


Figure 8. Math Test Information Function

Item Characteristic Curves

Item characteristic curves provide information linking the probability of success on an item with the ability level of the student. In Rasch modeling, all items curves have a common slope. The location of the item curves differ, however, based on the difficulty of the items. The following figures provide an illustration of a sample of item characteristic curves for each of the Learning Today assessments. Note the wide span of ability targeted by the different items on the reading and math scales. Item on the phonics scale have a more restricted range of targeted ability as they are primarily focused on addressing lower level skills.

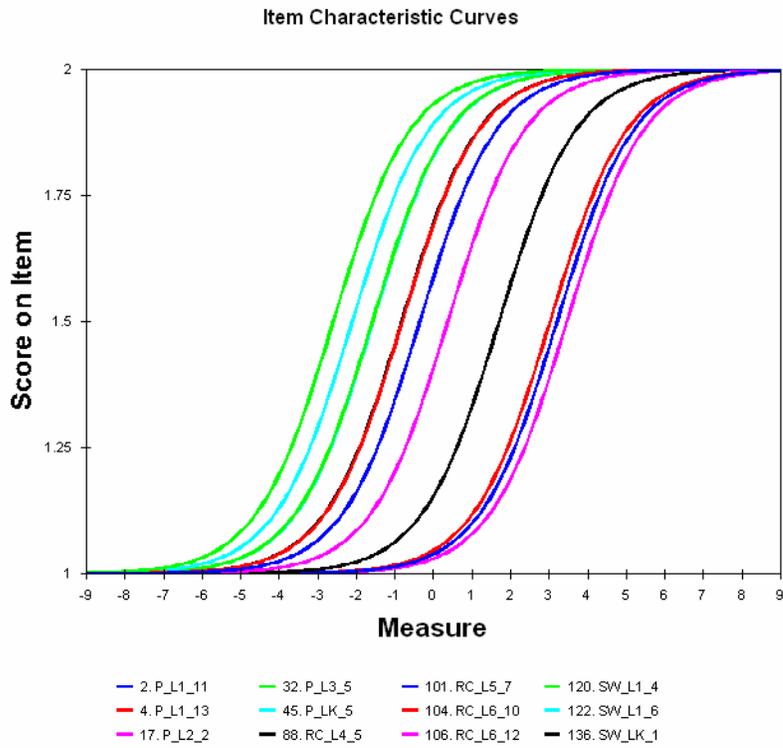


Figure 9. Reading Item Characteristic Curves

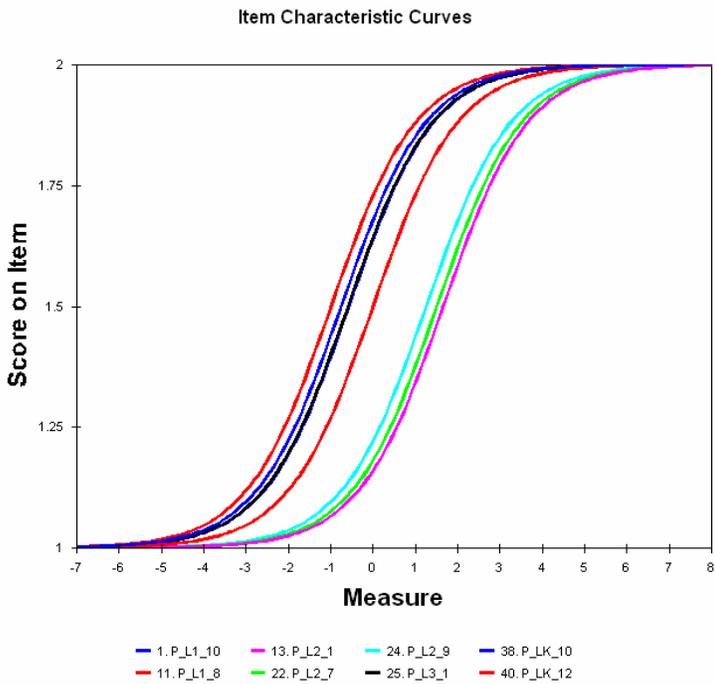


Figure 10. Phonics Item Characteristic Curves

Additional samples of ICCs for the mathematics assessment are provided below. Notice the variation in location for this subset of items which ranged from first to fifth grade content.

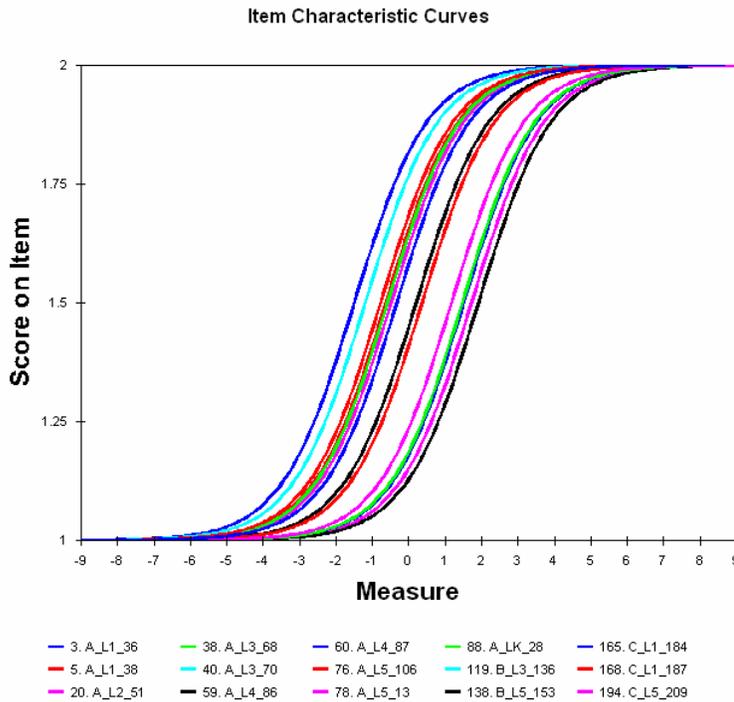


Figure 11. Math Item Characteristic Curves

Misfit Measures

In Rasch analysis, assessing fit of the data to the model is done by looking at misfit statistics for both item and respondents. One such statistic is the mean square fit statistic. When values of this statistic exceed 1.0, the observed variance is greater than expected. When values of this statistic are less than 1.0, the observed variance is less than expected. Items with larger mean square fit measures (much greater than 1.0) are the most problematic and contribute the least to the overall estimation of the construct of interest (Wilson, 2005). According to Lincacre (2006, p. 308), items with values over 2.0 “distorts or degrades the measurement system”, while items with values between 1.5 and 2.0 are “unproductive for construction of measurement, but not degrading”. Items with values below 1.5 but greater than .5 are “productive for measurement” and those with values less than .5 are “less productive, but not degrading”. In our calibration sample for the Learning Today tests, 5 of the 49 Phonics items (10%), 16 of the 179 Reading items (9%) and only 4 of the 216 Mathematics items (2%) demonstrated mean square fit statistics beyond 1.5. These items were removed from operational testing and analyzed for possible revision and re-introduction to the item pool at a later date. Thus, the resultant operational item pool for each of these assessments is comprised of items that are productive for measurement purposes without being degrading to the measurement process.

Scoring

In the Rasch model, item parameters and student ability estimates are generated in the logit scale, which theoretically range from negative to positive infinity (see Appendix for scoring algorithms). However, for the purposes of the Learning Today Adaptive Assessments, these logit scale values are transformed to a scale ranging from 100 to 700, with 400 being the central value. This scaling is accomplished by transforming the estimated logit values by the following equation:

Scale value = 400 + 50*logit value

Once transformed, it is necessary to impose a floor and ceiling values to keep the scores within the 100 to 700 scale range. This is achieved by simply recoding all values below 100 to 100 and all values above 700 to 700.

Placement

The primary function and purpose of the Learning Today assessments is to make appropriate instructional placement decisions for students performing at different levels within the K-5 grade span. To that end, it was important to establish a link between test performance and these placement decisions. Several guiding principles helped shape these determinations. First, some of the instructional modules such as those dealing with issues in Phonics or Phonemic Awareness do not span the entire grade range. As a result, many students will perform beyond the targeted region of the construct continuum and will not need such instruction. In those cases, students are generally exempted from placement regarding those instructional components. However, it is also important not to deny younger children from educational opportunities in these areas by aggressively placing them multiple grade levels above, even with ability estimations beyond the levels targeted by these modules. Thus, another guiding principle regarding placement decisions was that students would be placed no higher than the highest range of the subsequent grade in an instructional sequence that extended beyond that subsequent grade level. In that way, even the very best performing students would have exposure to important instructional material but would not be overly burdened with unchallenging material. The charts below demonstrate the placement strategy for various levels of performance on the Learning Today assessments in Phonics, Reading, and Mathematics.

min	max	K	1	2	3	4	5	6
upto	300	KL	KL	KL	KL	KL	KL	KL
301	330	KL	KL	KL	KL	KL	KL	KL
331	333	KL	1L	1L	1L	1L	1L	1L
334	363	KM	1L	1L	1L	1L	1L	1L
364	367	KM	1M	1L	1L	1L	1L	1L
368	390	KH	1M	1L	1L	1L	1L	1L
391	397	KH	1M	2L	2L	2L	2L	2L
398	400	KH	1H	2L	2L	2L	2L	2L
401	427	1L	1H	2L	3L	3L	3L	3L
428	430	1L	1H	2M	3L	3L	3L	3L
431	443	1L	2L	2M	3L	3L	3L	3L
444	463	1L	2L	2M	3M	3M	3M	3M
464	487	1L	2L	2H	3M	3M	3M	3M
488	500	1L	2L	2H	3H	3H	3H	3H
501	530	1L	2L	3L	3H	3H	3H	3H
531	700	1M	2M	3M	Exempt	Exempt	Exempt	Exempt

Figure 12. Phonics placement map.

min	max	K	1	2	3	4	5	6
upto	310	KL						
311	320	KM	KL	KL	KL	KL	KL	KL
321	340	KM	1L	1L	1L	1L	1L	1L
341	347	KH	1L	2L	2L	2L	2L	2L
348	350	KH	1M	2L	2L	2L	2L	2L
351	370	KH	1M	2L	3L	3L	3L	3L
371	373	1L	1M	2L	3L	3L	3L	3L
374	387	1L	1H	2L	3L	3L	3L	3L
388	400	1L	1H	2M	3L	3L	3L	3L
401	430	1L	2L	2M	3M	3L	3L	3L
431	433	1L	2L	2M	3M	4L	4L	4L
434	450	1L	2L	2H	3M	4L	4L	4L
451	477	1L	2L	2H	3H	4L	4L	4L
478	480	1L	2L	2H	3H	4M	4L	4L
481	490	1L	2L	3L	3H	4M	4L	4L
491	500	1L	2L	3L	3H	4M	5L	5L
501	510	1L	2L	3L	4L	4M	5L	5L
511	520	1L	2L	3L	4L	4M	5L	6L
521	523	1L	2L	3L	4L	4M	5M	6L
524	537	1L	2L	3L	4L	4H	5M	6L
538	550	1L	2L	3L	4L	4H	5M	6M
551	563	1L	2L	3L	4L	4H	5H	6M
564	570	1L	2L	3L	4L	4H	5H	6H
571	580	1L	2L	3L	4L	5L	5H	6H
581	590	1L	2L	3L	4L	5L	6L	6H

Figure 13. Reading placement map.

min	max	K	1	2	3	4	5
upto	303	KL	KL	KL	KL	KL	KL
304	330	KM	KL	KL	KL	KL	KL
331	337	KM	1L	1L	1L	1L	1L
338	350	KH	1L	1L	1L	1L	1L
351	353	KH	1L	2L	2L	2L	2L
354	360	KH	1M	2L	2L	2L	2L
361	370	KH	1M	2L	3L	3L	3L
371	377	1L	1M	2L	3L	3L	3L
378	380	1L	1H	2L	3L	3L	3L
381	390	1L	1H	2M	3L	3L	3L
391	397	1L	1H	2M	3L	4L	4L
398	400	1L	1H	2M	3M	4L	4L
401	410	1L	2L	2M	3M	4L	4L
411	423	1L	2L	2H	3M	4L	5L
424	433	1L	2L	2H	3M	4M	5L
434	440	1L	2L	2H	3H	4M	5L
441	457	1L	2L	3L	3H	4M	5L
458	467	1L	2L	3L	3H	4H	5L
468	470	1L	2L	3L	3H	4H	5M
471	490	1L	2L	3L	4L	4H	5M
491	523	1L	2L	3L	4L	5L	5M
524	and up	1L	2L	3L	4L	5L	5H

Figure 14. Mathematics placement map.

Validity Evidence

Establishing validity for a measurement instrument requires accumulating evidence to support the inferences made from the information provided by the instrument. Thus, validity is not considered a feature of a measure, but rather the collection of evidence that supports the particular uses of it (see AERA, APA, NCME, 1999). As with the approach taken throughout the development of the Learning Today assessments (Wilson, 2005), our focus for developing validity evidence is accumulating a specific set of arguments for an instrument which are used as a potential source of evidence for or against the planned usage of the measure. Thus evidence regarding test content, response processes, internal structure, relations to other variables, and consequences of testing are all relevant aspects of evidence accumulation.

Test Content

As part of the accumulation of evidence for the valid use of an instrument, it is important that the test is measuring the intended construct. Much of this evidence is obtained through the four building block process. As Mark Wilson explains, “..documentation of the steps taken...constitute a thorough representation of the content validity evidence for the instrument. It also lays the foundation for the remaining aspects of validity evidence – in a sense, the evidence related to content is the target of the remaining evidence.” (Wilson, 2005, p. 156-157).

Response Processes

Gathering evidence regarding the response processes can be obtained in two ways. The first is through think-aloud protocols while students are taking the assessments. The other is through interviews of students regarding their testing experiences following the test administration. In the case of the Learning Today assessments, a combination of these approaches was utilized. During the pilot study, researchers observed subjects taking the test and took notice of comments, actions, and behaviors by the students while they were testing. Following testing, selected students were then questioned regarding their experiences. These data provided support that the assessments provided challenge in the subject area for which they were designed to assess.

Internal Structure

To determine whether there is evidence to support the internal structure of an instrument suggests that an internal structure exists for the instrument. In the case of the Learning Today assessments, the suggested internal structure of the instrument comes from the construct maps and the ordering of the skills addressed at different stages on the map. Generally, the skills representing the lower levels on the construct map are ones generally associated with items targeted at lower grade levels, and skills representing higher levels on the construct map are ones generally associated with items targeted at higher grade levels. It is recognized that there is much overlap across grades to be expected with respect to the coverage of skills and difficulty of items, as much material is reviewed from year to year. However, what should be apparent from the estimated item difficulties is that, generally, items measuring skills targeting lower levels of the construct map should be easier and items measuring skills targeting higher levels of the construct map should be more difficult. One way of providing evidence that the items support this internal structure is to look at the means and distributions of item difficulties by grade level. A useful plot of this information for each subject area is provided below. These plots provide support that, generally, items targeting progressively higher grade levels are progressively more difficult. Thus, validity evidence to support the internal structure of the assessments is provided as the item calibrations supported the construct map and items design.

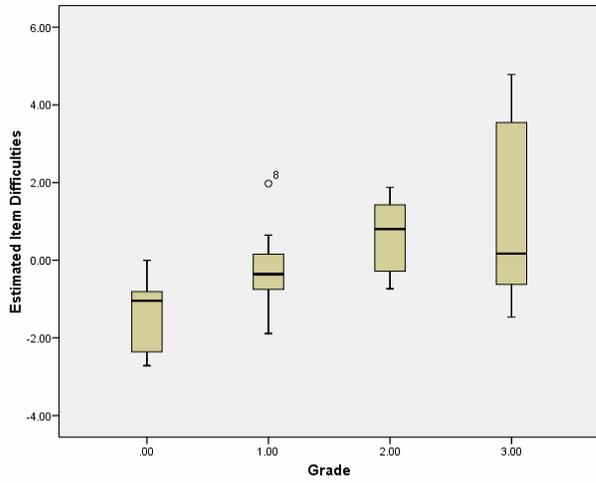


Figure 16. Phonics Item Difficulties by Grade

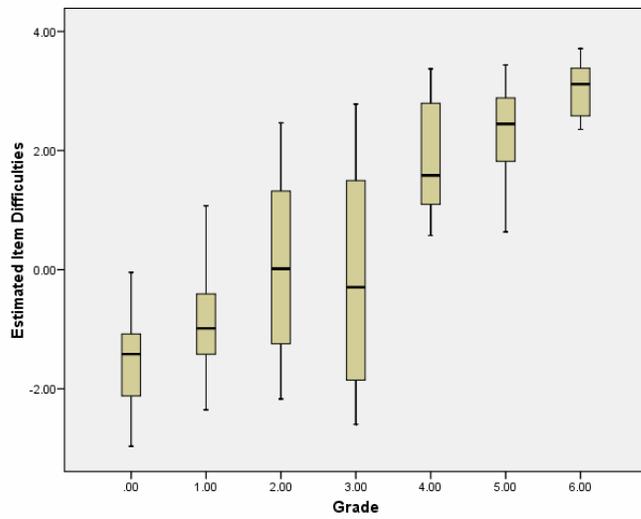


Figure 17. Reading Item Difficulties by Grade

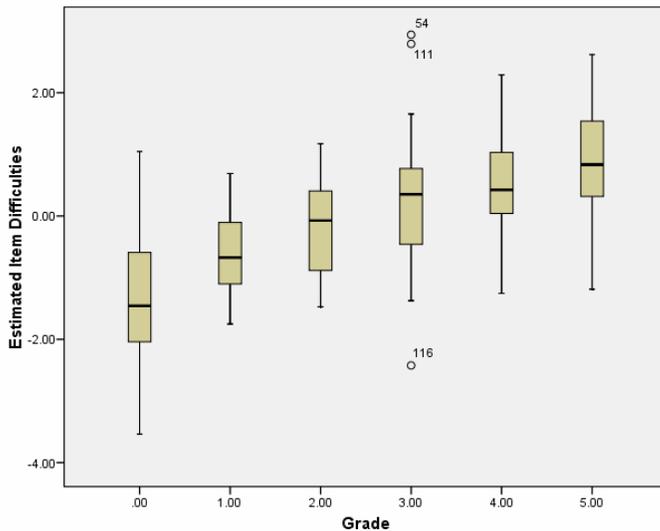


Figure 18. Mathematics Item Difficulties by Grade

Relations to Other Measures

When other variables are purported to be related to the construct being assessed or when other tests of same or similar constructs are administered, evidence of strong relationships between such measures and the instrument being developed can be provided as validity evidence. In the case of the Learning Today assessments which provide common scales for Phonics, Reading, and Mathematics across grade levels, it is anticipated that significant positive relationships would be observed between grade level and scale score. As expected scores showed a strong positive correlation with grade level for Mathematics ($r = .49$, $p < .001$), Phonics ($r = .769$, $p < .001$), and Reading ($r = .774$, $p < .001$).

Consequences of Use

Given that the test is beginning operational deployment as this documentation is being prepared, there is little current information regarding the consequences of the Learning Today assessments in actual practice. However, early results suggest that the placement decisions made for students as a function of their performance on the Learning Today assessments are consistent with good instructional practice and comport with the perceptions and judgments of students' classroom teachers.

Reliability Evidence

Like with validity, establishing the reliability of an instrument requires providing evidence. In the case of reliability, the evidence pertains to the consistency of the measure, and there are numerous ways to indicate the extent to which the measure consistently operates. In item response models, the degree of measurement error in the score estimates is of great importance.

Standard Errors of Measurement and Separation Indices

An important aspect of identifying the degree of precision and consistency of estimating student ability using a Rasch model is the standard error of measurement for ability estimations. These estimates are affected by many things, including how well the data fit the underlying model, student response consistency, student location on the ability continuum, match of items to student ability, and test length. Although there are no specific targets for observed standard errors, lower values of standard errors are preferable to higher values. The mean standard error for subjects in the calibration sample taking the Learning Today Mathematics assessment was .37 logits and for the Reading assessment it was .38 logits, which are well within the anticipated range for measurement precision. The observed standard errors were larger for the Phonics scale, as would be expected for a much shorter assessment. For the Phonics assessment, the mean standard error in the calibration sample was .93.

Other relevant measures provided by WINSTEPS (Lincacre, 2006) in Rasch analysis are separation indices and reliability estimates. Separation indices reflect the ratio of person (or item) standard deviation to the standard deviation of error and are closely related to reliability estimates (Wright, 1996). Values in excess of 2.0 indicate greater than 80% of the variance in scores is not due to error, but rather due to person or item differences. For the Learning Today tests, the Reading, Phonics, and Mathematics assessments all provide separation indices greater than 2.0 for both person and item separation. For the more common reliability measures, equally impressive results were obtained. For person reliability, which is equivalent to the more commonly recognized test reliability in classical test theory settings such as the KR-20 internal consistency reliability coefficient, values ranged from .83 for Phonics and Mathematics, to .93 for Reading. In each case, the reliability exceeded the desirable threshold of .80. Further, Rasch analysis provides an item reliability, or the ratio of true item variance to observed item variance, which has no direct counterpart in classical test analysis. For the Learning Today assessments, these values were quite high, above .96, indicating great consistency of item ordering.

	Reading	Phonics	Mathematics
Person Separation	3.74	2.24	2.22
Person Reliability	.93	.83	.83
Item Separation	7.84	6.52	5.08
Item Reliability	.98	.98	.96
Mean Standard Error	.38	.93	.37

Table 2. Reliability estimates by subject area

Future Investigations

Learning Today and West Coast Analytics realize that the process of developing and compiling validity evidence for an assessment product is a continuous one, and we continue to engage in research studies to provide such evidence, such as relating the Learning Today assessments with other measures of same or similar constructs. In addition, we continue to enhance and deepen the item pools used in these assessments on a regular basis through our embedding process, thereby strengthening the content coverage and increasing the adaptive efficiency of the assessments. Further, differential item functioning (DIF) analyses are scheduled to occur once sufficiently large sub-group samples sizes have been administered the assessments.

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Construct Maps for Mathematics

Numbers and Operations Construct Map

Highest

Numbers and Operations

Grade 5 Numbers and Operations High	Fractions	To solve proportion using cross-products.
	Fractions	To use multiplication and/or division to find equal ratios.
	Fractions	To use real world situations to estimate and calculate percentage.
	Fractions	To change decimals to percents and percents to decimals.
	Fractions	To change fractions to percents and percents to fractions.
	Fractions	To find percents using sets of 100 elements or fractions with denominator 100.
Grade 5 Numbers and Operations Medium	Fractions	To divide fractions using the algorithm.
	Fractions	To multiply fractions using the algorithm.
	Fractions	To find the product of a whole number and a fraction, and to find the product of two fractions using area and number line models.
	Problem Solving	To solve one- and two-step problems involving addition, subtraction and multiplication of decimals.
	Decimals	To estimate the quotient and to divide a decimal number by a 1-digit whole number in the context of money.
	Decimals	To estimate and find the product of two decimals numbers up to hundredths.
	Decimals	To multiply a decimal by a whole number in the context of money.
	Decimals	To add and subtract decimals using money notation.
Grade 5 Numbers and Operations Low	Problem Solving	To solve addition and subtraction problems with fractions with unlike denominators.
	Fractions	To express an improper fraction as a mixed number and a mixed number as an improper fractions.
	Problem Solving	To apply divisibility rules for 2,3 ,4 ,5 ,6 ,9 and 10.

**Grade 4
Numbers and Operations
High**

Problem Solving	To determine the greatest common factor of two numbers. (up to 50)
Problem Solving	To determine the prime factors of all numbers through 50 and write the numbers as the product of their prime factors.
Problem Solving	To identify prime and composite numbers up to 50.
Division	To divide four –digit dividends by two-digit divisors.
Multiplication	To multiply 2 and 3 digit numbers by 2 digit numbers.

**Grade 4
Numbers and Operations
Medium**

Problem Solving	To use problem-solving strategies to determine the operation(s) needed to solve one- and two-step problems involving addition, subtraction, multiplication, and division of whole numbers.
Decimals	Adding and Subtracting Decimals Using Money Notation.
Decimals	To compare and order decimals up to hundredths.
Decimals	To rename fractions as decimals, Tenths and Hundredths.
Fractions	To add and subtract fractions with unlike denominators.
Fractions	To add and subtract fractions with like denominators.
Fractions	To find a common denominator for two fractions, to compare and order two fractions with different denominators.
Fractions	To express an improper fraction as a mixed number or whole number using graphics. To plot improper numbers and mixed numbers on a number line. To write a fraction as a division problem.
Fractions	To compare and order fractions using fraction bars.
Fractions	To write fractions in simplest form, to rewrite a fraction as an equivalent fraction.
Fractions	To identify and name fractions as part of a set using models, pictures and drawings, ex. What is $\frac{2}{3}$ of 15?
Problem Solving	To identify multiples of whole numbers with products up to 100.
Problem Solving	To identify factors of numbers up to 100.
Problem Solving	To apply divisibility rules for 2, 3, 6, 9 and 10.
Division	To divide whole numbers up to 3digit numbers by a one digit number and to predict the relative size of the solution.

**Grade 4
Numbers and Operations
Low**

Division	To solve division facts with divisors.
Multiplication	To multiply a three-digit number by a one digit number and to predict the relative size of the solution.
Multiplication	To multiply a 2 digit number by a one digit number.
Multiplication	To multiply a number by a <u>power of ten</u> or a multiple of ten.
Multiplication	To apply the properties of multiplication: zero, identity, commutative, associative and distributive.
Multiplication	To solve multiplication facts.
Subtraction	To find the difference of two multi-digit numbers.
Addition	To find the sum of two multi-digit numbers..
Whole Numbers	To round whole numbers down and up to the nearest 10, 100, 1000.
Whole Numbers	To order numbers through One Million or More in a number line and using a place value chart. To compare numbers using the symbols.
Whole Numbers	To know the value of any given digit in whole numbers to One Million or More , to use the place value chart, to write and understand expanded forms of numbers and standard form using the comma as a place holder.
Decimals	To use language and symbols (>, <, =) to compare the relative size of decimal numbers in the context of money.
Decimals	To read, write, and identify decimal notation in the context of money.
Fractions	To use pictures, models and symbols (>,<=) to compare relative size of fractions.
Fractions	To understand that numbers can be represented in a variety of equivalent forms using fractions strips and pattern blocks.
Fractions	To identify and name fractions as <u>part of a set</u> using models, pictures and drawings. To read, write, and identify proper fractions with denominators including 2, 3, 4, 5, 6, 8, 10, 12.
Fractions	To identify and name fractions as <u>part of a whole</u> using models, pictures and drawings and to read, write, and identify proper fractions with denominators including 2, 3, 4, 5, 6, 8, 10, 12.
Division	To use a model to determine pair of factors of whole numbers through 60.
Division	To identify multiples of whole numbers with products up to 60.

**Grade 3
Numbers and Operations
High**

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**Grade 3
Numbers and Operations
Medium**

Problem Solving	To select and use appropriate operations to solve problems involving money with whole numbers.
Problem Solving	To know the related facts that represents the inverse relationship between multiplication and division and to complete multiplication/division fact families.
Division	To find the quotient of a 2digit number and a 1 digit number and to check a quotient using multiplication in the context of money.
Division	To predict the relative size of the solutions of division problems, to solve division problems having divisors of one digit, dividends not exceeding two digits, with or without remainders and to understand the relationship between multiplication and division.
Division	To solve division facts with divisors.
Division	To solve divion facts with divisors 2, 3, 4, 5.
Division	To find a quotient using the concept of sharing equal groups and to identify the remainder in a division problem.
Division	To find a quotient using the concept of partition in equal groups and to identify a remainder in a division problem.
Multiplication	To multiply a two-digit number by a one-digit number.
Multiplication	To multiply ten and a multiple of ten by a 1-digit number.
Multiplication	To solve multiplication facts facts having 6, 7, 8 and 9 as factor.
Multiplication	To solve multiplication facts doubles ($A \times B$, $A=B$) - Multiplication Facts.
Multiplication	To solve multiplication facts having 3, 4 and 5 as factor.
Multiplication	To solve multiplication facts using skip counting ($A \times B$, $A < 10$ and $B < 6$).
Multiplication	To recognize and write multiplication sentences to represent objects in a rectangular array and to recognize that the order of two factors does not affect their product.
Multiplication	To recognize equal groups in multiplication and use multiplication sentences to represent repeated addition.

**Grade 3
Numbers and Operations
Low**

Problem Solving	To solve addition and subtraction problems with 2digits whole numbers in the context of money.
Problem Solving	To solve number problems by selecting the proper operation.
Problem Solving	To know the related facts that represents the inverse relationship between addition and subtraction and to complete fact families.
Subtraction	To estimate the results of whole-number computations and to find the difference of two 3-digit numbers with regrouping.

**Grade 2
Numbers and Operations
High**

**Grade 2
Numbers and Operations
Medium**

Addition	To find the sum of two 3-digit numbers with regrouping.
Whole Numbers	To order numbers up to <u>hundred thousands</u> in a number line and using a place value chart. To compare numbers using the symbols <u>greater than ></u> and <u>less than <</u> .
Whole Numbers	To order numbers up to <u>thousand</u> in a number line and using a place value chart. To compare numbers using the symbols <u>greater than ></u> and <u>less than <</u> .
Whole Numbers	To round whole numbers down and up to the nearest Ten and Hundred.
Whole Numbers	To know the value of any given digit in whole numbers <u>to hundred thousands</u> , to write and understand expanded forms of numbers and standard form using the comma as a place holder.
Whole Numbers	To know the value of any given digit in whole numbers <u>to thousands</u> , to write and understand expanded forms of numbers and standard form using the comma as a place holder.
Fractions	To represent fractions ($1/2$, $1/4$,) as part of a set using drawings and to know that the total of equivalent fractional parts make a whole.
Fractions	To identify and name fractions ($1/2$, $1/4$, $3/4$) as part of a whole using concrete materials and drawings, to compare fractions and to know that the total of equivalent fractional parts make a whole.
Division	To find a quotient using the concept of partition in equal groups, to recognize and write division sentences.
Division	To find a quotient using the concept of sharing equal groups and to recognize and write division sentences.
Multiplication	To recognize equal groups of 2, 3, 4 or 5, in multiplication and to write multiplication sentences - Multiplication.
Subtraction	To use vertical subtraction to find the difference of two 2-digit numbers with regrouping.
Subtraction	To use a base ten model to find the difference of two two-digit numbers with regrouping.
Subtraction	To find the difference of a two-digit number minus a one digit number using mental math strategies.
Addition	To use vertical addition to find the sum of two two-digit numbers with regrouping.
Addition	To use a base ten model to find the sum of two two-digit numbers with regrouping.
Addition	To find the sum of a two-digit number plus a one digit number using mental math addition strategies.
Whole Numbers	To use base10 models to regroup and to create equivalent representations by regrouping. To identify the value of the digits in three-digit numbers.

**Grade 2
Numbers and Operations
Low**

Whole Numbers	To compare and order three-digit numbers using the symbols greater than > and less than <.
Whole Numbers	To use base 10 models to represent 3-digit numbers and to relate the grouping to the corresponding written numeral.
Whole Numbers	To count and group by 2s, 5s and 10s.
Problem Solving	To know the related facts that represents the inverse relationship between addition and subtraction and to complete fact families.
Subtraction	To solve basic subtraction facts by counting on, $A - B$ in which A is equal or smaller than 30 and B is a number close to A .
Subtraction	To solve basic subtraction facts by counting back to subtract 1, 2 or 3, $A - B$, $A < 100$.
Subtraction	To solve subtraction problems in comparison situations ($A - B$, A and $B < 20$).
Subtraction	To solve subtraction problems part-part-whole situations and to check the solution using addition ($A - B$, A and $B < 20$).
Subtraction	To solve subtraction problems in separation or take away situations and to check the solution using addition ($A - B = ?$, $A < 20$ and $B < 10$).
Addition	To add up to five one-digit numbers.
Addition	To identify and use combinations of ten to find sums, to use the "make ten" strategy to find sums.
Addition	To identify and use doubles and use "double plus" and "double minus" strategies to find sums (Ex $6 + 7 = 6 + 6 + 1 = 12 + 1 = 13$).
Whole Numbers	To recognize odd and even numbers up to 100.
Whole Numbers	To read and write number words from 1 - 120.

**Grade 1
Numbers and Operations
High**

Fractions	To represent fractions ($1/2$, $1/4$, $3/4$) as part of a set of up to 10 objects using concrete materials and drawings, to compare fractions in real-life situations.
Fractions	To represent fractions ($1/2$, $1/4$, $3/4$) as part of a whole using concrete materials and drawings, to compare fractions in real-life situations and to know that the total of equivalent fractional parts make a whole.
Subtraction	To find the differences of two digit numbers without regrouping.
Subtraction	To find the difference of a two digit number and ten.
Addition	To find the sum of two digit numbers without regrouping.
Addition	To find the sum of a two digit number plus ten or a multiple of ten.

**Grade 1
Numbers and Operations
Medium**

**Grade 1
Numbers and Operations
Low**

Addition	To find the sum of a two digit number plus a one digit number.
Whole Numbers	To use base10 models to regroup and to create equivalent representations of 2-digit numbers by regrouping.
Whole Numbers	To use base10 models to represent 2-digit numbers and to relate the grouping to the corresponding written numeral.
Whole Numbers	To group objects in sets of ten and to count orally to 100 by 210s using a 100 chart and/or concrete material.
Whole Numbers	To group objects in sets of five and to count orally to 100 by 5s using a chart and/or concrete material.
Whole Numbers	To group objects in sets of two and to count orally to 20 by 2s using a chart and/or concrete material.
Problem Solving	To solve simple number problems by selecting the proper operation, +1, -1, +2, -2, +10, -10.
Problem Solving	To know the related facts that represents the inverse relationship between addition and subtraction and to complete fact families.
Subtraction	To solve basic subtraction facts by counting on. A - B, A is equal or smaller then 20 and B is a number close to A.
Subtraction	To solve basic subtraction facts by counting back to subtract 1, 2 or 3. A - B, A is equal or smaller then 20 and B is 1, 2 or 3..
Subtraction	To solve subtraction problems in comparison situations, How many more? How many fewer? How many are needed? (A - B, A and B < 12) .
Subtraction	To solve subtraction problems part-part-whole situations, to built number sentence and to check the solution using addition (A - B, A and B < 12).
Subtraction	To solve subtraction problems in separation or take away situations (A - B, A and B < 12).
Addition	To develop strategies for adding three one-digit numbers and to solve addition problems with three sets.
Addition	To identify doubles addition facts and to solve addition problems using doubles.
Addition	To find the combinations of 10 and to identify missing addends.
Addition	To know the facts sums of 6, 7, 8, 9.
Addition	To build number sentences to represent and solve by "counting on" addition problems a + b where a is a number less or equal to 10 and b is 1, 2 or 3.
Addition	To built number sentences to represent addition problems and to recognize that the order of addends does not affect the sum.
Whole Numbers	To find complements of 10 and to understand that the number ten can be represented in a variety of equivalent forms.

	Whole Numbers	To compare and order two -digit numbers using the symbols greater then $>$ and less then $<$, to determine the order of up to three non-consecutive numbers less than 100. .
	Whole Numbers	To use ordinal numbers to indicate position up to 10th.
	Whole Numbers	To count backward by one beginning with any number less than 100.
	Whole Numbers	to count forward by one beginning with any number less than 100.
	Whole Numbers	To recognize the numerals up to 100.
Kindergarten Numbers and Operations High	Fractions	To develop the concept of whole, parts, and parts that make a whole (halves and fourths) and to make the connection between the parts of real objects and the oral names of those parts.
	Problem Solving	To use a number line to count up and count back from a given number < 20 to add or subtract one and two.
	Subtraction	To count back to subtract 1, 2 or 3 (Minuend = or < 10).
	Subtraction	To solve subtraction problems in separations or "take away"situations with numbers less then 10 and to write number sentences for subtraction situations.
	Addition	To solve addition problems using "counting on" with addends less then 10.
	Addition	To solve combining and joining addition problems with addends 1 - 10, to use the term "plus" and the symbol $+$ to describe addition situations and the term "equal" to describe equal sets and to recognize the symbol $=$
Kindergarten Numbers and Operations Medium	Whole Numbers	To find complements of 10. (A and B equals 10)
	Whole Numbers	To compare two sets with up to 10 objects in each set. To identify which set is equal to, more than, or less than the other.
	Whole Numbers	To use ordinal numbers to indicate position up to 6th.
	Whole Numbers	To create sets of objects with one less and to identify the number that come before a given number in a number line.
	Whole Numbers	To create sets of objects with one more to identify the number that come after a given number in a number line up to 10.
	Whole Numbers	To count on(1 -4) from a given number up to 20.
	Whole Numbers	To count objects in a given set & to create a set of a given size up to 20.

**Kindergarten
Numbers and Operations
Low**

Whole Numbers To count backwrds from 10 to 0.

Whole Numbers To create a set of a given size up to 10.

Whole Numbers To count the number of objects in a given set up to 10.

Whole Numbers To recognize the numerals up to 10.

Lowest

Measurement Construct Map

	Highest
Grade 5 Measurement High	<p>Measurement</p> <p>To use a scale in a map to calculate distances between two places. To use the legend and compass on a map to find places.</p> <p>To identify and measure angles using a virtual protractor.</p> <p>To classify angle measures as acute, obtuse, right, or straight. To recognize complementary and supplementary angles. To recognize perpendicular and parallel lines.</p> <p>To calculate the volume of <u>cubes, polyhedrons and prisms</u> using formulas.</p>
Grade 5 Measurement Medium	<p>To convert and compare measurements of capacity (2.5 l and 250 ml) using a conversion chart.</p> <p>To convert and compare measurements of capacity (9 pints and 4 cups) using a conversion chart.</p> <p>To convert and compare measurements of weight (2.5kg and 2,500g) using a conversion chart.</p> <p>To convert and compare measurements of weight (1lb3oz and 19oz) using a conversion chart.</p>
Grade 5 Measurement Low	<p>To convert and compare measurements of length with different units (5cm and 50m) using a conversion chart.</p> <p>To convert to compare measurements of length with different units (76 inches and <u>6 feet 2 inches</u>) using a conversion chart.</p> <p>To make change by counting up using the fewest number of bills and coins.</p>
Grade 4 Measurement High	<p>To find the circumference using the given formula $C = \pi \times d$ (calculator).</p> <p>To find the perimeter adding the measurement of each side.</p> <p>To apply formulas to calculate the area of a rectangle, square, parallelogram, triangle.</p> <p>To decide which is the best unit of measurement: milliliters or liters.</p> <p>To decide which is the best unit of measurement: teaspoon, tablespoon, fluid ounce, cup, quart, gallon.</p>
Grade 4 Measurement Medium	<p>To decide which is the best unit of measurement: Grams and Kilograms.</p> <p>To decide which is the best unit of measurement: Ounces, Pounds or Tons.</p> <p>To compare measurements of length with different units (75m \Leftrightarrow 65,000 km) using a conversion chart.</p> <p>To convert units of length: Millimeters, Centimeters, Meters, Kilometers Measurement.</p> <p>To decide which is the best unit of measurement: Millimeters, Centimeters, Meters, Kilometers.</p>

**Grade 4
Measurement
Low**

To compare measurements of length with different units (32feet \Leftrightarrow 10 yards?) using a conversion chart..

To convert units of length: Inches, Feet, Yards, and Miles (conversion chart).

To measure length with a ruler to the 1/4 inch.

To decide which is the best unit of measurement: Inches, Feet, Yards, and Miles.

To associated a given temperature (Celsius or Fahrenheit) to a situation. To read a thermometer. To understand the difference between Celsius and Fahrenheit scales.

To use elapsed time to solve real world problems.

To identify, count and know the value of bills and coins. To write money using the \$ sign.

**Grade 3
Measurement
High**

To estimate how much a container hold: about 1 liter, more than 1 liter, less than 1 liter.
To decide which is the best unit of measurement: milliliters or liters.

To use the equivalence of cups, pints, gallons and quarts to find equal amounts of liquid.

To use the equivalence of cups and pints to make the amount of liquid equal (6 cups and 3 pints).

To decide which is the best unit of measurement: grams or kilograms.

To balance a scale with 2 ounces spoons.

To compare the weight of two objects given a reference (a soccer ball weights 1 pound, which weights more a soccer ball or a baby?).

To use a balance scale to measure and compare ounces and pounds.

**Grade 3
Measurement
Medium**

To decide which is the best unit of measurement: Meters or Kilometers. To compare two different measures using a conversion chart (Which is longer? 100m is longer than 200cm).

To measure length using a benchmark (Golf Tee is about 5 cm long).

To measure length using a ruler and centimeters.

To decide whether an estimate or a measurement is needed in a given situation.

To measure length using a benchmark (a paper clip about 2 inches).

To decide which is the best unit of measurement: Inches, Feet, Yards, or Miles. To compare two different measures using a conversion chart (18 inches is longer than 1 foot).

To measure length using a ruler and inches.

To compare the length of two objects: longer, taller, shorter, thicker.

**Grade 3
Measurement
Low**

To associate the weather to temperature using Celsius units.

To associate the weather to temperature using Fahrenheit units.

To identify the day of the week of a given date using a calendar.

To find a given date (Month/Day/Year) in a calendar.

	To know the order of the months.
	To decide if the estimated time is reasonable.
	To determine the duration of intervals of time.
	To tell time to the minute.
Grade 2 Measurement High	To choose the more appropriate unit to measure liquid in a container: Liters or Milliliters.
	To use the equivalences of Cups, Pints, Quarts and Gallons to find equal amounts of liquid.
	To choose the more appropriate unit to measure: Grams or Kilograms.
	To measure weight using a virtual scale and pounds and to measure weight using a virtual balance and a non-standard unit (apples).
	To decide which is the best unit of measurement: Ounces or Pounds.
Grade 2 Medium	To measure length with standard (centimeters with a ruler) and non standard units (staples).
	To determine the most appropriate unit of measurement: inches, feet, yards.
	To measure length with pennies and inches (ruler).
	To decide which is the best unit of measurement, would you measure the length of a table in inches, feet or yards?
	To read the temperature in Celsius Thermometers.
	To read the temperature in Fahrenheit Thermometers.
Grade 2 Low	To estimate time: about how long an everyday activity take (minutes, hours or days).
	To tell time to fifteen minutes intervals.
	To tell time to five minutes interval.
	Given a start time to determine what time will be in x hours and/or minutes.
	To select an appropriate tool (clock or calendar) to measure time according to the circumstances.
	To know and use decimal notation and the dollar and cents symbols for money. To count and compare coins using mixed counting to one dollar or more.
Grade 1 High	To tell time to the hour and half hour using analog clocks. To select appropriate units (hours, days, minutes) to measure time.
	To recognize, know and compare the values of a penny, nickel, dime and quarter.
Grade 1 Medium	

**Grade 1
Low**

**Kindergarten
High**

**Kindergarten
Medium**

**Kindergarten
Low**

Lowest

To know and compare the values of a penny, nickel , and dime.

To compare which activity takes a shorter amount of time. To identify the time (am or pm) of everyday events.

Geometry Construct Map

	Highest	
		Geometry
Grade 5 High		To predict and describe the results of flips, slides and turns.
		To identify rotational symmetry in 2D and 3D figures. To visualize and predict results of reflecting 2D and 3D objects.
Grade 5 Medium		To describe relationship between two or more 2D objects based on their parallel and perpendicular lines.
		To use points, lines, line segment, rays and planes. To differentiate and create 2D objects.
		To identify radius, diameter, center, circumference and chord.
Grade 5 Low		
Grade 4 High		To identify, locate, and plot ordered pairs on a coordinate grid. To find the distance between two points.
		To identify or draw 2D nets that will make 3D objects.
Grade 4 Medium		To use attributes to prove that 2 objects are congruent or similar.
Grade 4 Low		To sort and classify triangles according to their side, length and angle measures.
		To describe and identify different types of irregular and regular quadrilaterals including: square, rectangle, parallelogram, rhombus, trapezoid, kite.
Grade 3 High		To create and identify flip and slide transformations.
		To identify one or more lines of symmetry in 2D and 3D figures. To predict and create reflections of 2D objects.
Grade 3 Medium		To use coordinate systems to specify locations and to describe paths.
Grade 3 Low		To classify objects as congruent.

<p>Grade 2 High</p>	<p>To sort and classify 2D objects, including triangles, quadrilaterals, pentagons, hexagons and octagons according to curves, vertices, angles and sides.</p> <p>To compare and contrast attributes of 3D figures including numbers of vertices, faces and edge. To build 3D objects using 2D shapes.</p>
<p>Grade 2 Medium</p>	<p>To dissect and reform 2D shapes to create other 2D shapes, predict results of combining and dividing 2D shapes.</p>
<p>Grade 2 Low</p>	<p>To identify one or more lines of symmetry in 2D figure.</p>
<p>Grade 1 High</p>	<p>To recognize and apply slides, flips and turns.</p>
<p>Grade 1 Medium</p>	<p>To use positional language to describe relationships of objects (left, right); to give and follow directions to locations using maps.</p>
<p>Grade 1 Low</p>	<p>To compare and contrast attributes of 2D shapes including number of sides and corners. To create and sort 2D shapes including circle, square, rectangle, triangle and diamond.</p> <p>To compare attributes of three-dimensional figures including cubes, spheres, cones, rectangular solids and cylinders.</p>
<p>Kindergarten High</p>	<p>To use objects to perform geometric transformations, including slides and turns, to match objects to outlines of their shapes.</p>
<p>Kindergarten Medium</p>	
<p>Kindergarten Low</p>	<p>To identify spatial relationships including in and out, above and below. To follow directions to move objects in relation to another over, under, top, bottom, behind, in between.</p>

Construct Maps for Reading/Phonics

Phonemic Awareness Construct Map

v5.0

updated 8/2/07

Highest	
Students have mastered Late Grade 1 Phonemic Awareness	<ul style="list-style-type: none"> <u>Substitutes medial sounds (phoneme substitution)</u> <u>Substitutes final sounds (phoneme substitution)</u> <u>Substitutes initial (phoneme substitution)</u> <u>Adds final sounds (phoneme addition)</u> <u>Adds initial sounds (phoneme addition)</u> <u>Deletes final sounds (phoneme deletion)</u> <u>Deletes initial sounds (phoneme deletion)</u> <u>Segments words by sounds (phoneme segmentation)</u> <u>Counts sounds in words (phoneme counting)</u>
Students have mastered Early Grade 1 Phonemic Awareness	<ul style="list-style-type: none"> <u>Blends individual sounds to form a word - works up from 2-sound to 5-sound words (phoneme blending)</u> <u>Identifies the position of a sound in a word - medial (phoneme approximation)</u> <u>Identifies the position of a sound in a word - final (phoneme approximation)</u> <u>Identifies the position of a sound in a word - initial (phoneme approximation)</u> <u>Categorizes words by medial sound (phoneme categorization)</u> <u>Categorizes words by final sound (phoneme categorization)</u> <u>Identifies medial sounds (phoneme identification)</u> <u>Identifies final sounds (phoneme identification)</u> <u>Isolates medial sounds (phoneme isolation)</u> <u>Isolates final sounds (phoneme isolation)</u>
Students have mastered Kindergarten Phonemic Awareness	<ul style="list-style-type: none"> <u>Categorizes words by initial sound (phoneme categorization)</u> <u>Categorizes words by initial sound (phoneme categorization)</u> <u>Identifies same initial sounds in different words (phoneme identification)</u> <u>Isolates initial sounds (phoneme isolation)</u> <u>Matches rhyming words (rhyming)</u> <u>Matches rhyming words (rhyming)</u> <u>Identifies rhymes (rhyming)</u>
Lowest	

Phonics Construct Map

v7

updated 8/9/07

	Highest
Students have mastered Grade 3 Phonics	<ul style="list-style-type: none"> • Identifies syllable boundaries of a word based on morphemic units (prefixes, suffixes, base words, & root words) <hr/> • Identifies syllable boundaries of a word based on morphemic units (prefixes, suffixes, base words, & root words) <hr/> • Identifies syllable boundaries of a word based on morphemic units (prefixes, suffixes, base words, & root words) <hr/> • Identifies syllable boundaries of a word based on morphemic units (prefixes, suffixes, base words, & root words) <hr/> • Identifies syllable boundaries of a word based on morphemic units (prefixes, suffixes, base words, & root words) <hr/> • Identifies syllable boundaries of a word based on morphemic units (prefixes, suffixes, base words, & root words) <hr/> • Identifies syllable boundaries of a word based on morphemic units (prefixes, suffixes, base words, & root words) <hr/> • Identifies syllable boundaries of a word based on morphemic units (prefixes, suffixes, base words, & root words) <hr/> • Decodes 3-4 syllable words <hr/> • Decodes polysyllabic words with affixes (prefixes & suffixes) <hr/> • Decodes polysyllabic words with affixes (prefixes & suffixes) <hr/> • Decodes polysyllabic words with affixes (prefixes & suffixes)

	<ul style="list-style-type: none"> • Decodes polysyllabic words with affixes (prefixes & suffixes)
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	<ul style="list-style-type: none"> • Decodes polysyllabic words with affixes (prefixes & suffixes)
	<ul style="list-style-type: none"> • Decodes polysyllabic words with affixes (prefixes & suffixes)
Students have mastered Grade 2 Phonics	<ul style="list-style-type: none"> • Decodes 2-syllable words • Decodes words with inflectional endings (verb tenses, plurals, possessives) • Decodes words with inflectional endings (verb tenses, plurals, possessives) • Decodes words with inflectional endings (verb tenses, plurals, possessives) • Decodes words with inflectional endings (verb tenses, plurals, possessives) • Decodes words with other vowel patterns (digraphs & diphthongs): oo (moon), ew (blew), oo (foot), ou (out), ow (cow), oy (boy), oi (oil), aw (law), au (author) • Decodes words with other vowel patterns (digraphs & diphthongs): oo (moon), ew (blew), oo (foot), ou (out), ow (cow), oy (boy), oi (oil), aw (law), au (author) • Decodes words with other vowel patterns (digraphs & diphthongs): oo (moon), ew (blew), oo (foot), ou (out), ow (cow), oy (boy), oi (oil), aw (law), au (author) • Decodes words with other vowel patterns (digraphs & diphthongs): oo (moon), ew (blew), oo (foot), ou (out), ow (cow), oy (boy), oi (oil), aw (law), au (author) • Decodes words with 2-letter, 1-sound combinations (kn, wr, ph) (only 1 item needed) • Identifies syllable boundaries of 2-syllable words • Identifies syllable boundaries of 2-syllable words
Students have mastered Grade 1 Phonics	<ul style="list-style-type: none"> • Decodes common compound words by dividing them into separate base words (syllabication) • Decodes words with common inflectional endings –es, –ed, –ing • Decodes words with r-controlled vowels

• Decodes words with long vowel digraphs: ai, ay, ee, ea, igh, oa, ow (grow), ew (few)

• Decodes words with long vowel digraphs: ai, ay, ee, ea, igh, oa, ow (grow), ew (few)

• Decodes words beginning with 2- or 3-letter s-blends: CCVCC (slick), CCCVC (split), and CCCVCC (stress)

• Decodes CCVC words beginning with l-blends, r-blends (words such as blob, frog,)

• Decodes words with final e (long vowel)

• Decodes words with final e (long vowel)

• Decodes CVCC words (words beginning with a stop sound and ending with a consonant blend, such as tent)

• Decodes VCC and CVCC words beginning with a continuous sound and ending with either a stop

or a continuous sound (end, its, sack, fill)

• Identifies the number of syllables in spoken and written words

• Identifies the consonant or digraph heard at the end of a word "d"

• Identifies the consonant or digraph heard at the end of a word

• Identifies the long vowel sound within a 1-syllable word

• Matches long vowel sounds to letters in isolation

• Identifies the consonant heard at the beginning of a word (soft c, soft g)

• Matches consonant sounds to letters in isolation (soft c, soft g)

• Matches sounds of digraphs (ch, wh) and 2-letter, 1-sound combination (qu) to letters in isolation

• Matches sounds of digraphs (ch, wh) and 2-letter, 1-sound combination (qu) to letters in isolation

• Identifies the consonant heard at the beginning of a word (v, j, k, w, x, y, z)

• Identifies the digraph heard at the beginning of a word (th, sh)

• Matches sounds of digraphs (th, sh) to letters in isolation

	<ul style="list-style-type: none"> • Identifies the consonant heard at the beginning of a word (n, b, c, h, d, g) • Identifies the consonant heard at the beginning of a word (m, s, f, l, r, t, p)
<p>Students have mastered Kindergarten Phonics</p>	<ul style="list-style-type: none"> • Decodes simple VC and CVC words (words with a continuous sound and ending with either a stop or a continuous sound, such as at, am, mop, man) • Decodes simple VC and CVC words (words with a continuous sound and ending with either a stop or a continuous sound, such as at, am, mop, man) • Matches consonant and short vowel sounds to letters in isolation - z • Matches consonant and short vowel sounds to letters in isolation - y • Matches consonant and short vowel sounds to letters in isolation - short e • Matches consonant and short vowel sounds to letters in isolation - x • Matches consonant and short vowel sounds to letters in isolation - w • Matches consonant and short vowel sounds to letters in isolation - short u • Matches consonant and short vowel sounds to letters in isolation - ck • Matches consonant and short vowel sounds to letters in isolation - k • Matches consonant and short vowel sounds to letters in isolation - j • Matches consonant and short vowel sounds to letters in isolation - v • Matches consonant and short vowel sounds to letters in isolation - g • Matches consonant and short vowel sounds to letters in isolation - short i • Matches consonant and short vowel sounds to letters in isolation - d • Matches consonant and short vowel sounds to letters in isolation - h • Matches consonant and short vowel sounds to letters in isolation - short o

	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - c
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - b
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - n
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - short a
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - p
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - t
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - r
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - l
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - f
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - s
	<ul style="list-style-type: none"> • Matches consonant and short vowel sounds to letters in isolation - m
	<ul style="list-style-type: none"> • Names lowercase letters A-Z
	<ul style="list-style-type: none"> • Names uppercase letters A-Z
	<ul style="list-style-type: none"> • Recognizes lowercase letters A-Z
	<ul style="list-style-type: none"> • Recognizes uppercase letters A-Z

Lowest

	<ul style="list-style-type: none"> • does, goes, write, always, made • off, cold, tell, work, first • sleep, five, or, before, been • don't, right, green, their, call • would, very, yours, its, around
Students have mastered Late Grade 1 Sight Words	Identifies and names the following sight words in addition to those at previous levels (list is sequenced along the scale moving up from lowest to highest):
	<ul style="list-style-type: none"> • car • man, boy, box, bed, set • once, open, has, live, thank • may, stop, fly, round, give • think, let, going, walk, again • where, every, old, by, after • any, how, know, put, take • ask, an, over, just, from • as, then, could, when, them • of, had, him, her, some
Students have mastered Early Grade 1 (Primer) Sight Words	<p>Q1 Identifies and names the following sight words in addition to those at previous levels (list is sequenced along the scale moving up from lowest to highest):</p> <ul style="list-style-type: none"> • day, dog, fat, sat, ball • please • white, soon, our, say, under • eat, who, new, must, black • four, saw, well, ran, brown • into, good, want, too, pretty • are, now, no, came, ride • like, this, will, yes, went • do, did, what, so, get • all, there, out, be, am • on, they, but, at, with • he, was, his, that, she
Students have mastered Kindergarten Sight Words	Identifies and names the following sight words (list is sequenced along the scale moving up from lowest to highest):

• ate, here, were, **your**

• play, run, find, three, **funny**

• here, **help**, make, yellow, two

• come, blue, red, jump, **away**

• not, **one**, my, me, big

• have, little, down, can, see

• up, **look**, is, go, we

• you, it, in, **said**, for

• the, to, **and**, a, I

Lowest

Notes:

Dolch words are in **red**.

Fry Instant words are in **purple**.

Vocabulary Construct Map

v6

updated 8/9/07

Highest

<p>Students have mastered Grade 8 Vocabulary</p>	<ul style="list-style-type: none"> • Demonstrates the ability to restate figurative language in context with literal terms. (e.g. The earth's thirst has been quenched/It rained, The meadow erupted in color/The flowers bloomed) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of grade and content appropriate words with Greek, Latin, and Anglo-Saxon roots and affixes (e.g. projection, antibody, chronology, democracy, interject, synchronize, pandemic, chronometer, panchromatic, deduction, production, antithesis, panacea, aristocracy, bureaucracy, theocracy, foreword, foresight, foreman, knighthood, brotherhood, livelihood, likelihood, stereotype, astern, likewise, lifelike, centimeter, thermometer, thermal, epidemic, abduct) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of grade and content appropriate words with Greek, Latin, and Anglo-Saxon roots and affixes (e.g. projection, antibody, chronology, democracy, interject, synchronize, pandemic, chronometer, panchromatic, deduction, production, antithesis, panacea, aristocracy, bureaucracy, theocracy, foreword, foresight, foreman, knighthood, brotherhood, livelihood, likelihood, stereotype, astern, likewise, lifelike, centimeter, thermometer, thermal, epidemic, abduct) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of Greek, Latin, and Anglo-Saxon affixes(e.g. pro-, anti-, -meter, pan-, -cracy, fore-, -hood) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of Anglo-Saxon roots (e.g. -lik-, ster-) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of roots derived from Latin (e.g. -duc-, -ject-) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of roots derived from Greek (e.g -chron-, -dem-, therm-) <hr/> <ul style="list-style-type: none"> • Understands the meanings of words in grade-appropriate content areas [e.g. science (acceleration, efficiency, translucent, opaque, variable), social studies (artifacts, migration, province, pilgrimage), language arts (assonance, resolution, stanza)]
<p>Students have mastered Grade 7 Vocabulary</p>	<ul style="list-style-type: none"> • Identifies the positive or negative connotations of grade-appropriate words in context [e.g. antique (pos.) vs. old (neg.), determined (pos.) vs. stubborn (neg.), cautious (pos.) vs. fearful (neg.), relaxed (pos.) vs. lazy (neg.)] <hr/> <ul style="list-style-type: none"> • Understands the meanings of common idioms with grade-appropriate vocabulary in context [e.g. under the weather (ill), true colors (real intentions), on the ball (paying attention), upper hand (control)]

	<ul style="list-style-type: none"> • Identifies the meanings of grade and content appropriate words with Greek, Latin, and Anglo-Saxon roots and/or affixes (e.g. officious, momentous, specious, capitalism, optimism, communism, subscribe, transcribe, transgress, prescribe, digress, transatlantic, empathy, sympathy, apathetic, metamorphic, amorphous, dimorphism, didactic, dioxide, metaphor, championship, leadership, kingdom, fiefdom, warden, steward, welfare, farewell, fanfare, feverish, squeamish, stylish, metabolism, telepathic, manuscript, pathology) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of grade and content appropriate words with Greek, Latin, and Anglo-Saxon roots and/or affixes (e.g. officious, momentous, specious, capitalism, optimism, communism, subscribe, transcribe, transgress, prescribe, digress, transatlantic, empathy, sympathy, apathetic, metamorphic, amorphous, dimorphism, didactic, dioxide, metaphor, championship, leadership, kingdom, fiefdom, warden, steward, welfare, farewell, fanfare, feverish, squeamish, stylish, metabolism, telepathic, manuscript, pathology) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of Greek, Latin, and Anglo-Saxon affixes (e.g. trans-, -ous, -ism, di-, meta-, -ish, -ship, -dom) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of Anglo-Saxon roots (e.g. -ward-, -fare-) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of roots derived from Latin (e.g. -scrib/script-, -gress-) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of roots derived from Greek (e.g -path-, -morph-) <hr/> <ul style="list-style-type: none"> • Understands the meanings of words in grade-appropriate content areas [e.g. science (nucleus, electrons, protons), social studies (diversity, drought, urban, ethnicity), language arts (onomatopoeia, personification, narrative)]
<p>Students have mastered Grade 6 Vocabulary</p>	<ul style="list-style-type: none"> • Understands “shades of meaning” in related words (e.g. softly/quietly, essential/vital, solitary/desolate, frightened/terrified) <hr/> <ul style="list-style-type: none"> • Understands the meanings of idioms with simple vocabulary in context [e.g. pass the buck (not take responsibility) two peas in a pod (very similar), sitting duck (easy prey), over the top (too much)] <hr/> <ul style="list-style-type: none"> • Understands the meanings of common similes and metaphors with grade-appropriate vocabulary in context [e.g. a rare jewel (precious), clear as mud (not clear), obstinate as a mule (stubborn), free as a bird (carefree), a volcano (explosive)] <hr/> <ul style="list-style-type: none"> • Recognizes the meanings of frequently used foreign words in English (i.e. bravo, chauffeur, genre, bronco, sonnet, et cetera, fiesta, balcony, maize, tsunami) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of words with roots and affixes derived from Latin or Greek and grade-appropriate prefixes and suffixes. (e.g. logic, enlist, enrich, irregular, irresponsible, incredible, credible, credulous, guardian, logician, apologize, autobiography, autograph, automatic, congregation, conform, vocabulary, vocalize, magician, domicile, dominant, domestic) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of suffixes derived from Greek and Latin (e.g. -ian, -ic, -ize)

	<ul style="list-style-type: none"> • Identifies the meanings of prefixes derived from Greek and Latin (e.g. auto-, en-, ir-, con-) • Identifies the meanings of roots derived from Latin (e.g. -cred-, -voc-) • Identifies the meanings of roots derived from Greek (e.g -log-, -dom-) • Understands the meanings of words in grade-appropriate content areas [e.g. science (mass, volume, density), social studies (prehistory, archeologist, scribe, cuneiform), language arts (theme, simile, alliteration)] • Identifies multiple meaning words (e.g. buckle/buckle, cinch/cinch, complex/complex, hunch/hunch, mellow/mellow, rash/rash)
<p>Students have mastered Grade 5 Vocabulary</p>	<ul style="list-style-type: none"> • Understands the meaning of common similes and metaphors with simple vocabulary in context [e.g. run like the wind (fast), a rose (beautiful), a lamb (very gentle), sleep like a log (sleep well), a dream (wonderful)] • Identifies the meanings of words with roots and affixes derived from Latin or Greek and grade-appropriate prefixes and suffixes. (e.g. transport, import, inspect, spectator, dictionary, predict, phonograph, photograph, biology, biography, geography, conduct, product, production, canine, festive, genuine, primitive, instinctive, destructive, marine, forehead, forecast, forego, impatient, impossible, immature, frantic, reality, unity) • Identifies the meanings of suffixes derived from Greek and Latin (e.g. -ine, -ive, -ity,) • Identifies the meanings of prefixes derived from Greek and Latin (e.g. fore-, im-) • Identifies the meanings of roots derived from Latin (e.g. -duct-, port-, -spect-, -dict-) • Identifies the meanings of roots derived from Greek (e.g -graph-, photo-, bio-) • Completes analogies with grade-appropriate vocabulary (e.g. express/say: believe/think, raise/lower: accept/reject, lizard/reptile: bison/mamma, chef/cooking: author/writing) • Identifies the meanings of grade-appropriate homophones (e.g. ceiling/sealing, cereal/serial, fairy/ferry, flea/flee, him/hymn, moan, mown, moor, more, shear, sheer) • Identifies grade-appropriate antonyms (e.g. absence/presence, defend/attack, import/export, discourage/encourage, harsh/pleasant) • Identifies grade-appropriate synonyms (e.g. abundant/ample, expand/enlarge, disbelief/doubt, mold/fungus, precise/specific, transform/modify) • Identifies multiple meaning words (e.g. tense/tense, superior/superior, slim/slim, deliver/deliver, alert/alert, loom/loom) • Uses context clues to choose grade-appropriate words to complete sentences (Grade 5 words: e.g. boycott, empire, festival, mammal, rehearsal, shield, textbook, union)

Students have mastered Grade 4 Vocabulary

- Identifies the meanings of words with roots and affixes derived from Latin or Greek and grade-appropriate prefixes and suffixes. (e.g. exit, explode, geology, telescope, telephone, astronaut, astronomy, tractor, attract, interrupt, erupt, vision, visible, interfere, submit, submarine, artist, scientist, typist, assistance, conscience, experience, appearance, instance, microscope)
- Identifies the meanings of common suffixes derived from Greek and Latin (e.g. –ance, –ence, –logy, –ist)
- Identifies the meanings of common prefixes derived from Greek and Latin (e.g. ex-, inter-, sub-)
- Identifies the meanings of common roots derived from Latin (e.g. –tract-, -rupt-, -vis-)
- Identifies the meanings of common roots derived from Greek (e.g. tele-, astr-, -phon-, geo-, -scope-)
- Identifies the meanings of words with number prefixes derived from Greek: uni-, bi-, tri- (e.g. bicycle, tricycle, triangle, universal, uniform)
- Completes analogies with simple vocabulary (e.g. bird/air: fish/sea, blue/sky: green/grass, puppy/dog: kitten/cat, carrot/vegetable: lemon/fruit)
- Identifies the meanings of grade-appropriate homophones (e.g. profit/prophet, aloud/allowed, groan/grown, break/brake, course/coarse, creak/creek)
- Identifies grade-appropriate antonyms (e.g. capture/release, harmful/harmless, cowardly/courageous, boundless/limited, ashamed/proud)
- Identifies grade-appropriate synonyms (e.g. grateful/thankful, amuse/entertain, adore/love, accuse/blame, circular/round, medicine/remedy)
- Identifies multiple meaning words (e.g. anchor/anchor, balance/balance, cape/cape, secure/secure, serious/serious, project/project)
- Uses context clues to choose grade-appropriate words to complete sentences (Grade 4 words: e.g. auditorium, boundary, computer, dictionary, friendship, secretary)
- Uses a thesaurus to build upon word meanings.

Students have mastered Grade 3 Vocabulary

- Identifies base words (e.g. laugh, comfort, agree, direct, kind, sense, heat, like)
- Identifies the meanings of grade-appropriate suffixed words with common suffixes: –y, –tion, –able, –less, –ness, –ment (e.g. funny, gloomy, election, education, laughable, comfortable, helpless, restless, kindness, fitness, management, employment)
- Identifies the meanings of grade-appropriate prefixed words with common prefixes: in-, dis-, mis-, pre-, non- (e.g. independent, indirect, dislike, disagree, mistreat, misuse, precook, preheat, preview, nonsense, nonfiction)
- Identifies the meanings of grade-appropriate prefixed words with common prefixes: in-, dis-, mis-, pre-, non- (e.g. independent, indirect, dislike, disagree, mistreat, misuse, precook, preheat, preview, nonsense, nonfiction)

	<ul style="list-style-type: none"> • Identifies the meanings of common homophones (e.g. peace/piece, weigh/way, sent/scent, whether/weather, write/right, through/threw, road/rode/rowed, heard/herd, which/witch, wood/would, flour/flower) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of common homophones (e.g. peace/piece, weigh/way, sent/scent, whether/weather, write/right, through/threw, road/rode/rowed, heard/herd, which/witch, wood/would, flour/flower) <hr/> <ul style="list-style-type: none"> • Identifies common antonyms (e.g. difficult/easy, build/destroy, strong/weak, far/near, pull/push, interesting/boring) <hr/> <ul style="list-style-type: none"> • Identifies common synonyms (e.g. create/make, story/tale, bake/cook, enemy/foe, fair/just) <hr/> <ul style="list-style-type: none"> • Identifies multiple meaning words (e.g. air/air, beam/beam, cheer/cheer, grave/grave, nature/nature, rear/rear, stump/stump) <hr/> <ul style="list-style-type: none"> • Uses context clues to choose grade-appropriate words to complete sentences(Grade 3 words: e.g. awake, danger, laundry, message, museum, puzzle, science, vegetable, whisper) <hr/> <ul style="list-style-type: none"> • Uses a dictionary to build upon word meanings.
<p>Students have mastered Grade 2 Vocabulary</p>	<ul style="list-style-type: none"> • Identifies the meanings of common contractions (e.g. I'll, I'm, I've, we're, can't, won't, don't, didn't) <hr/> <ul style="list-style-type: none"> • Identifies base words (e.g. happy, real, read, make, small, loud, use, care) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of grade-appropriate suffixed words with simple suffixes: -ly, -er, -est, -ful (e.g. lovely, loudly, smaller, larger, smallest, largest, useful, careful) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of grade-appropriate suffixed words with simple suffixes: -ly, -er, -est, -ful (e.g. lovely, loudly, smaller, larger, smallest, largest, useful, careful) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of grade-appropriate prefixed words with simple prefixes: un-, re- (e.g. reread, remake, unhappy, unreal) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of grade-appropriate prefixed words with simple prefixes: un-, re- (e.g. reread, remake, unhappy, unreal) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of simple homophones (e.g. to/two/too, see/sea, for/four, ate/eight, mail/male, meat/meet, son/son, by/buy, their/there/they're, no/know, hear/here) <hr/> <ul style="list-style-type: none"> • Identifies simple antonyms (e.g. hot/cold, happy/sad, dirty/clean, old/new, slow/fast) <hr/> <ul style="list-style-type: none"> • Identifies simple antonyms (e.g. hot/cold, happy/sad, dirty/clean, old/new, slow/fast) <hr/> <ul style="list-style-type: none"> • Identifies simple synonyms (e.g. stone/rock, large/big, small/little, rabbit/bunny)

	<ul style="list-style-type: none"> • Identifies simple multiple meaning words (e.g. light/light, roll/roll, face/face, stick/stick, star/star) <hr/> <ul style="list-style-type: none"> • Identifies simple multiple meaning words (e.g. light/light, roll/roll, face/face, stick/stick, star/star) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of common compound words (e.g. ladybug, newspaper, blackberry, lighthouse, toothpaste) <hr/> <ul style="list-style-type: none"> • Uses context clues to choose grade-appropriate words to complete sentences (Grade 2 words e.g. afternoon, angry, center, furniture, middle, nature, several, vacation, world) <hr/> <ul style="list-style-type: none"> • Uses a glossary to build upon word meanings.
<p>Students have mastered Grade 1 Vocabulary</p>	<ul style="list-style-type: none"> • Identifies the meanings of grade-appropriate words with inflectional endings (e.g. –s, -es, -ed, -ing) <hr/> <ul style="list-style-type: none"> • Identifies simple multiple meaning words (e.g. bat/bat, pen/pen, jam/jam, ring/ring) <hr/> <ul style="list-style-type: none"> • Identifies simple multiple meaning words (e.g. bat/bat, pen/pen, jam/jam, ring/ring) <hr/> <ul style="list-style-type: none"> • Identifies simple multiple meaning words (e.g. bat/bat, pen/pen, jam/jam, ring/ring) <hr/> <ul style="list-style-type: none"> • Identifies the meanings of common compound words (e.g. baseball, goldfish, bathtub, homework) <hr/> <ul style="list-style-type: none"> • Listens and sorts categories of words (e.g. animals) into concrete collections (e.g. zoo animals, farm animals, pet animals etc.) <hr/> <ul style="list-style-type: none"> • Listens and uses context clues to choose grade-appropriate words to complete sentences (Grade 1 words: e.g. desk, door, enter, fun, help, ladder, movie, ocean, round, sleep) <hr/> <ul style="list-style-type: none"> • Listens and uses context clues to choose grade-appropriate words to complete sentences (Grade 1 words: e.g. desk, door, enter, fun, help, ladder, movie, ocean, round, sleep) <hr/> <p>Listens to identify words from within basic categories (with a few sample words)</p> <hr/> <p>Directional Words: north, south, east west</p> <hr/> <p>Math Words: add, count, subtract, compare, less, more</p> <hr/> <p>Music Words: drum, piano, flute, tuba, violin</p> <hr/> <p>Zoo Animal Words: monkey, elephant, giraffe, zebra</p> <hr/> <p>Farm Animal Words: pig, goat, horse, sheep, duck</p> <hr/> <p>Bugs: caterpillar, butterfly, cricket, moth, spider, beetle</p> <hr/> <p>Weather Words: sun, cloud, rain, snow, storm</p>

Students have mastered Kindergarten Vocabulary

• Listens and sorts words into categories (e.g. colors, shapes, food)

Listens to identify words that name:

people: friend, teacher, children, baby, boy, girl, father, mother, sister, brother

people: friend, teacher, children, baby, boy, girl, father, mother, sister, brother

places: beach, mountains, farm, store, home, park, school

things: slide, swing, skates, trees, seesaw

actions: read, sing, write, draw, paint, skip, walk, hop, run,

Listens to identify words from basic categories: (with a few sample words)

Directional Words: up, down, left, right

Positional Words: on, front, next, between, behind, inside, outside, under, over

Seasons: spring, summer, fall, winter

Seasons: spring, summer, fall, winter

Clothing Words: hat, shirt, pants, dress, skirt, sock, shoe

Food Words: apple, meat, eggs, bread, milk, lemon,

Body Words: arm, leg, head, eyes, ears, mouth, nose

Size Words: short, long, big, small

Shape Words: circle, triangle, square, rectangle, diamond

Animal Words: dog, cat, fish, pig, cow, mouse, frog

Color Words: black, white, brown, orange, green, purple, red, blue, yellow

Lowest

**Reading Comprehension
Construct Map**

v7.1

8/17/2007

Highest

Students have mastered Grade 8 Reading Comprehension

Determines how to solve a problem using information from a variety of consumer, workplace, and public documents.
Explains a situation or decision using information from a variety of consumer, workplace, and public documents.
Follows technical directions to explain the use of a complex mechanical device, e.g. how to set up a computer.
Compares and contrasts features and elements of consumer materials to gain meaning from documents: warranties, contracts, product information, instruction manuals.
Summarizes an 8.7-8.9 level text naming main character, setting, plot (exposition, rising action, and climax), problem/conflict, complications, character's attempts to solve the problem, and resolution.
Summarizes a level 8.7-8.9 non-fiction text identifying the topic, main ideas and supporting details.
Summarizes a level 8.7-8.9 non-fiction text identifying the topic, main ideas and supporting details.
Identifies the topic, multiple main ideas and supporting details of a level 8.7-8.9 text using titles, subtitles, visuals (photos, illustrations), captions, and text.
Evaluates the logic, coherence, and consistency of text at the 8.7-8.9 level.
Evaluates whether a text at the 8.7-8.9 level follows a clear structural pattern.
Evaluates the unity of text at the 8.7-8.9 level.
Identifies how a work of literature written at the 8.7-8.9 reflects the heritage, traditions, attitudes, and beliefs of its author.
Compares an original text at the 8.7-8.9 level to a summary to determine whether the summary accurately captures the main ideas, critical details, and underlying meaning.
Identifies the relationship between the purposes and characteristics of different forms of poetry.
Identifies the purposes and characteristics of different forms of poetry: ballad, epic, narrative poem, lyric poem, ode, and sonnet.

	Identifies features of poetry: rhythm, rhyme, end rhyme, internal rhyme, free verse, alliteration, assonance, onomatopoeia.
	Identifies the text structures of enumeration, chronology, compare/contrast, and cause/effect in an 8.7-8.9 level text.
	Identifies supported and unsupported inferences in an 8.7-8.9 level text.
	Recognizes allusions to shared cultural references in an 8.7-8.9 level text.
	Identifies examples of faulty reasoning in an 8.7-8.9 level text: hasty generalization, false cause and effect, either/or fallacy, stereotyping, name-calling, assuming all are in agreement.
	Uses literary devices to interpret an author's work in an 8.7-8.9 level text.
	Identifies significant literary devices in an 8.7-8.9 level text that define a writer's style: simile, metaphor, symbolism, dialect, irony, personification.
	Identifies significant literary devices in an 8.7-8.9 level text: metaphor, symbolism, dialect, irony, personification.
	Generates literal and inferential questions to guide the reading of an 8.7-8.9 level text before and during reading (sets a purpose).
	Draws inferences, conclusions, or generalizations about 8.7-8.9 level text and supports them with textual evidence and prior knowledge.
	Draws inferences, conclusions, or generalizations about 8.7-8.9 level text and supports them with textual evidence and prior knowledge.
	Identifies the text information and personal knowledge used to make predictions about elements in an 8.7-8.9 level text.
	Makes, supports, and adjusts predictions with explicit and implicit evidence from 8.7-8.9 level fiction and non-fiction text.
	Makes personal connections and responds to 8.7-8.9 level text.
	Summarizes an 8.4-8.6 level text naming main character, setting, plot (exposition, rising action, and climax), problem/conflict, complications, character's attempts to solve the problem, and resolution.
	Summarizes a level 8.4-8.6 non-fiction text identifying the topic, main ideas and supporting details.
	Identifies the topic, multiple main ideas and supporting details of a level 8.4-8.6 text using titles, subtitles, visuals (photos, illustrations), captions, and text.
	Compares and contrasts texts in their treatment and scope of ideas in an 8.4-8.6 level text.
	Connects and clarifies main ideas across texts written at an 8.4-8.6 level text.
	Identifies the author's purpose in an 8.4-8.6 level text.

	<p>Identifies literary elements and devices in an 8.4-8.6 level text: theme, symbolism, foreshadowing, irony, conflict.</p> <p>Identifies and analyzes recurring themes (e.g. good vs. evil) across traditional and contemporary works written at an 8.4-8.6 level.</p> <p>Identifies the chronology of events using explicit and implicit evidence in an 8.4-8.6 level text.</p> <p>Identifies the setting and analyzes its relevance to the mood, tone, and meaning of an 8.4-8.6 level text.</p> <p>Identifies the mood or tone of an 8.4-8.6 level text and the textual evidence that indicates the mood or tone.</p> <p>Identifies details which help a reader visualize the setting of an 8.4-8.6 level text.</p> <p>Generates literal and inferential questions to guide the reading of an 8.4-8.6 level text before and during reading (sets a purpose).</p> <p>Draws inferences, conclusions, or generalizations about 8.4-8.6 level text and supports them with textual evidence and prior knowledge.</p> <p>Identifies the text information and personal knowledge used to make predictions about elements in an 8.4-8.6 level text.</p> <p>Makes, supports, and adjusts predictions with explicit and implicit evidence from 8.4-8.6 level fiction and non-fiction text.</p>
	<p>Summarizes an 8.1-8.3 level text naming main character, setting, plot (exposition, rising action, and climax), problem/conflict, complications, character's attempts to solve the problem, and resolution.</p> <p>Summarizes a level 8.1-8.3 non-fiction text identifying the topic, main ideas and supporting details.</p> <p>Identifies the topic, multiple main ideas and supporting details of a level 8.1-8.3 text using titles, subtitles, visuals (photos, illustrations), captions, and text.</p> <p>Assesses accuracy of the author's evidence to support claims and assertions in an 8.1-8.3 level text.</p> <p>Identifies the author's purpose in an 8.1-8.3 level text.</p> <p>Compares and contrasts texts in their treatment and scope of ideas in an 8.1-8.3 level text.</p> <p>Uses text features (headings, subheadings) to predict the organizational pattern of an 8.1-8.3 level text.</p> <p>Identifies the text structures of enumeration, chronology, compare/contrast, and cause/effect in an 8.1-8.3 level text.</p> <p>Compares and contrasts motivations and reactions of literary characters from different historical eras confronting similar situations or conflicts in 8.1-8.3 level texts.</p>

	<p>Distinguishes features of direct characterization (stating directly what a character is like) and indirect characterization (describing the character's appearance, showing the character's actions, hearing the character speak, revealing the character's thoughts and feelings) in an 8.1-8.3 level text.</p> <p>Identifies and evaluates the way in which conflicts are or are not addressed and resolved in an 8.1-8.3 level text.</p> <p>Identifies and evaluates the author's argument in an 8.1-8.3 level text written in the proposition/support pattern.</p> <p>Identifies text written in the proposition/support pattern in an 8.1-8.3 level text.</p> <p>Identifies examples of foreshadowing in an 8.1-8.3 level text.</p> <p>Identifies and evaluates how characters' actions, motivations, and conflicts advance plot development in an 8.1-8.3 level text.</p> <p>Identifies and evaluates structural elements of the plot in an 8.1-8.3 level text: subplots, parallel episodes, climax.</p> <p>Generates literal and inferential questions to guide the reading of an 8.1-8.3 level text before and during reading (sets a purpose).</p> <p>Draws inferences, conclusions, or generalizations about 8.4-8.6 level text and supports them with textual evidence and prior knowledge.</p> <p>Identifies the text information and personal knowledge used to make predictions about elements in an 8.1-8.3 level text.</p> <p>Makes, supports, and adjusts predictions with explicit and implicit evidence from 8.1-8.3 level fiction and non-fiction text.</p> <p>Makes personal connections and responds to 8.1-8.3 level text.</p>
<p>Students have mastered Grade 7 Reading Comprehension</p>	<p>Monitors and clarifies understanding by adjusting reading rate, self-questioning, referring to graphics, rereading and reading ahead in level 7.7-7.9 te</p> <p>Summarizes a 7.7-7.9 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, complications, character's attempts to solve the problem, and resolution.</p> <p>Summarizes a 7.7-7.9 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, complications, character's attempts to solve the problem, and resolution.</p> <p>Summarizes a level 7.7-7.9 non-fiction text identifying the topic, main ideas and supporting details.</p> <p>Reads and explains technical directions for the use of a simple mechanical device or to complete a mechanical process (changing a flat tire).</p>

Locates information using a variety of consumer (advertising, schedules, labels, warranties, contracts, instructional manuals), workplace (business letters, applications, contracts, work permits, tax forms, insurance forms, employee manuals), and public documents (newspaper articles that report on documents).

Identifies and evaluates archetypal patterns in myths and legends in a 7.7-7.9 level text, e.g. heroic quest

Recognizes mythic archetypes in a 7.7-7.9 level text, e.g. evil knight, hero

Identifies and evaluates an author's use of bias and stereotyping in a 7.7-7.9 level text.

Evaluates the adequacy, accuracy, and appropriateness of the author's evidence to support claims and assertions in a 7.7-7.9 level text.

Identifies features of the genre of legends in a 7.7-7.9 level text.

Identifies cause and effect relationships (1 cause multiple effects, multiple causes 1 effect, chain of cause and effect) in a 7.7-7.9 level text.

Identifies a character's traits and how those traits affect plot development in a 7.7-7.9 level text.

Analyzes characterization through the narrator's description, and the thoughts, words, and actions of other characters in a 7.7-7.9 level text.

Analyzes characterization through the narrator's description, and the thoughts, words, and actions of other characters in a 7.7-7.9 level text.

Analyzes characterization through a character's thoughts, words, speech patterns, and actions in a 7.7-7.9 level text.

Identifies the characteristics and purposes of different forms of prose written at a 7.7-7.9 level: short story, novel, novella, and essay.

Identifies idioms, analogies, metaphors, and similes in prose and poetry in a 7.7-7.9 level text.

Generates literal and inferential questions to guide the reading of a 7.7-7.9 level text before and during reading (sets a purpose).

Draws and supports conclusions with evidence from a 7.7-7.9 level text.

Identifies the text information and personal knowledge used to make inferences about elements in a 7.7-7.9 level text.

Makes inferences based on text information from a 7.7-7.9 level text and prior knowledge.

Identifies the text information and personal knowledge used to make predictions and inferences about elements in a 7.7-7.9 level text.

Makes, supports, and adjusts predictions with explicit and implicit evidence from 7.7-7.9 level fiction and non-fiction text.

Makes personal connections and responds to 7.7-7.9 level text.

Monitors and clarifies understanding by adjusting reading rate, self-questioning, referring to graphics, rereading and reading ahead in level 7.4-7.6 text.

Summarizes a 7.4-7.6 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, complications, character's attempts to solve the problem, and resolution.

Summarizes a level 7.4-7.6 non-fiction text identifying the topic, main ideas and supporting details.

Recognizes character archetypes, e.g. wicked stepmother, hero, in a 7.4-7.6 level text.

Recognizes patterns in fairy tales across many cultures in a 7.4-7.6 level text.

Contrasts points of view (first- and third-person, limited and omniscient), and explains how they affect they overall theme in a 7.4-7.6 level text.

Distinguishes limited from omniscient point of view in a 7.4-7.6 level text.

Identifies and traces the development of the author's argument, point of view or perspective in a 7.4-7.6 level text.

Identifies the author's purpose in a 7.4-7.6 level text.

Identifies an author's use of idioms, simile and metaphor in a 7.4-7.6 level text.

Identifies the author's use of analogy (explaining one idea by showing how it is similar to another, more easily understood idea) in a 7.4-7.6 level text.

Identifies words that signal the cause/effect pattern in a 7.4-7.6 level text: so, because, reason why, resulted in, therefore.

Identifies text written in the cause/effect pattern in a 7.4-7.6 level text.

Identifies and analyzes recurring themes across works written at a 7.4-7.6 level.

Distinguishes between the subject and theme of a 7.4-7.6 level text.

Identifies features of the genre of narrative poetry in a 7.4-7.6 level text.

Generates literal and inferential questions to guide the reading of a 7.4-7.6 level text before and during reading (sets a purpose).

Draws and supports conclusions with evidence from a 7.4-7.6 level text.

Identifies the text information and personal knowledge used to make inferences about elements in a 7.4-7.6 level text.

Makes inferences based on text information from a 7.4-7.6 level text and prior knowledge.

	<p>Identifies the text information and personal knowledge used to make predictions and inferences about elements in a 7.4-7.6 level text.</p>
	<p>Makes, supports, and adjusts predictions with explicit and implicit evidence from 7.4-7.6 level fiction and non-fiction text.</p>
	<p>Makes personal connections and responds to 7.4-7.6 level text.</p>
	<p>Monitors and clarifies understanding by adjusting reading rate, self-questioning, referring to graphics, rereading and reading ahead in level 7.1-7.3 text.</p>
	<p>Analyzes the differences in structure and purpose between various categories of informational materials: textbooks, newspapers, and instructional manuals.</p>
	<p>Summarizes a 7.1-7.3 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, complications, character's attempts to solve the problem, and resolution.</p>
	<p>Summarizes a level 7.1-7.3 non-fiction text identifying the topic, main ideas and supporting details.</p>
	<p>Identifies the topic, multiple main ideas and supporting details of a level 7.1-7.3 text using titles, subtitles, visuals (photos, illustrations), captions, and text.</p>
	<p>Distinguishes facts, supported inferences, and opinions in a 7.1-7.3 level informational text.</p>
	<p>Identifies text written in the compare/contrast pattern in a 7.1-7.3 level text.</p>
	<p>Makes generalizations based on character's action in a 7.1-7.3 level text.</p>
	<p>Analyzes characterization through the narrator's description, and the thoughts, words, and actions of other characters in a 7.1-7.3 level text.</p>
	<p>Analyzes characterization through a character's thoughts, words, speech patterns, and actions in a 7.1-7.3 level text.</p>
	<p>Reads and follows multi-step directions in a technical manual, e.g. a cell phone manual.</p>
	<p>Identifies the structural features and purpose of a 7.1-7.9 level technical manual, e.g. directions organized in steps, diagrams.</p>
	<p>Identifies the theme or underlying message in a 7.1-7.3 level text.</p>
	<p>Identifies structural features and their purpose in a 7.1-7.9 textbook: table of contents, illustrations and photographs, captions, boxed text, boldfaced terms, chapter headings, and subheads.</p>
	<p>Identifies the motives and traits of characters in a 7.1-7.3 level text.</p>
	<p>Identifies the structural features and purpose of a news article written at a 7.1-7.3 level: inverted pyramid, headline, subhead, byline, dateline, lead, and tone.</p>

	<p>Identifies techniques an author uses to create foreshadowing and suspense in a 7.1-7.3 level text.</p> <p>Identifies events that advance the plot, and determines how each event explains past or present actions or foreshadows future actions in a 7.1-7.3 level text.</p> <p>Generates literal and inferential questions to guide the reading of a 7.1-7.3 level text before and during reading (sets a purpose).</p> <p>Draws and supports conclusions with evidence from a 7.1-7.3 level text.</p> <p>Identifies the text information and personal knowledge used to make inferences about elements in a 7.1-7.3 level text.</p> <p>Makes inferences based on text information from a 7.1-7.3 level text and prior knowledge.</p> <p>Identifies the text information and personal knowledge used to make predictions and inferences about elements in a 7.1-7.3 level text.</p> <p>Makes, supports, and adjusts predictions with explicit and implicit evidence from 7.1-7.3 level fiction and non-fiction text.</p> <p>Makes personal connections and responds to 7.1-7.3 level text.</p>
<p>Students have mastered Grade 6 Reading Comprehension</p>	<p>Locates and interprets information from multiple sources: encyclopedias, trade books, newspapers, magazines, primary source materials, web s</p> <p>Identifies the structural features of popular media and uses the features to obtain information: newspapers, magazines, and online information.</p> <p>Compares and evaluates information from more than one reference source.</p> <p>Monitors and clarifies understanding by adjusting reading rate, self-questioning, referring to graphics, rereading and reading ahead in level 6.7-6.9 text.</p> <p>Summarizes a 6.7-6.9 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.</p> <p>Summarizes a level 6.7-6.9 non-fiction text identifying the topic, main ideas and supporting details.</p> <p>Identifies the topic, multiple main ideas and supporting details of a level 6.7-6.9 text using titles, subtitles, visuals (photos, illustrations), captions, and text.</p> <p>Identifies features of themes conveyed through characters, actions, and images in a 6.7-6.9 level text.</p> <p>Identifies and analyzes recurring themes across works in a 6.7-6.9 level text, e.g. the value of bravery, loyalty, and friendship, the effects of loneliness.</p>

Evaluates information for accuracy and bias in a 6.7-6.9 level text.
Identifies an author's viewpoint and bias in a 6.7-6.9 level text.
Compares and contrasts two stories within a main story in a 6.7-6.9 level text.
Identifies a cause that has more than one effect and an effect that has more than one cause in a 6.7-6.9 level text.
Identifies multiple examples of explicit and implicit cause and effect in a 6.7-6.9 level text.
Categorizes and classifies information in a 6.7-6.9 level text.
Identifies the speaker and recognizes the difference between first- and third-person narration in a 6.7-6.9 level text.
Identifies elements of first-person narrative in a 6.7-6.9 level text.
Identifies characteristics of the science fiction genre in a 6.7-6.9 level text.
Creates a sequenced set of directions based on information in a 6.7-6.9 level text.
Identifies how tone or meaning is conveyed in poetry through word choice, figurative language, sentence structure, line length, punctuation, rhythm, repetition, and rhyme in a 6.7-6.9 level text.
Identifies and explains the effects of common literary devices in a 6.7-6.9 level text: symbolism, imagery, metaphor, irony, and personification.
Identifies details that help to picture an event or image described by an author in a 6.7-6.9 level text.
Identifies characteristics of the biography genre in a 6.7-6.9 level text.
Distinguishes between internal and external conflict in a 6.7-6.9 level text.
Identifies problems faced by characters and evaluates possible solutions in a 6.7-6.9 level text.
Identifies multiple problems and solutions in a 6.7-6.9 level text.
Identifies persuasive techniques commonly used in propaganda in a 6.7-6.9 level text: overgeneralizations, testimonial, bandwagon, transfer, faulty cause and effect.
Identifies the sequence of events in a 6.7-6.9 level text.
Generates literal and inferential questions to guide the reading of a 6.7-6.9 level text before and during reading (sets a purpose).
Draws and supports conclusions with evidence from a 6.7-6.9 level text.
Makes inferences based on text information from a 6.7-6.9 level text and prior knowledge.
Identifies the text information and personal knowledge used to make predictions and inferences about elements in a 6.7-6.9 level text.

	Makes, supports, and adjusts predictions with explicit and implicit evidence from 6.7-6.9 level fiction and non-fiction text.
	Makes personal connections and responds to 6.7-6.9 level text.
	Adjusts rate and style of reading to the purpose for reading and the nature of the material being read in a 6.4-6.6 level text.
	Monitors and clarifies understanding by adjusting reading rate, self-questioning, referring to graphics, rereading and reading ahead in level 6.4-6.6 text.
	Summarizes a 6.4-6.6 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.
	Summarizes a level 6.4-6.6 non-fiction text identifying the topic, main ideas and supporting details.
	Identifies the topic, multiple main ideas and supporting details of a level 6.4-6.6 text using titles, subtitles, visuals (photos, illustrations), captions, and text.
	Distinguishes a passage organized by main idea from one organized by comparing and contrasting in a 6.4-6.6 level text.
	Distinguishes the most important details from less important details in a 6.4-6.6 level nonfiction text.
	Identifies the theme or moral in a 6.4-6.6 level text.
	Identifies an author's viewpoint and bias in a 6.4-6.6 level text.
	Identifies sarcasm and determines a character's attitudes and feelings based on sarcastic statements in a 6.4-6.6 level text.
	Identifies elements of realistic fiction written in first-person narrative in a 6.4-6.6 level text.
	Identifies techniques of persuasive writing in a 6.4-6.6 level text.
	Identifies comparisons expressed in similes in a 6.4-6.6 level text.
	Identifies poetic techniques that create rhythm or meter: punctuation, ellipses, rhyming words.
	Identifies characteristics of and examples of propaganda in a 6.4-6.6 level text.
	Identifies characteristics of the realistic fiction and expository nonfiction genres in a 6.4-6.6 level text.
	Distinguishes dialect from Standard English and explains its purpose in a 6.4-6.6 level text.
	Contrasts the actions, motives and appearances of characters in a 6.4-6.6 level text and determines the importance of the contrasts to the plot or theme.

	Analyzes the effect of a character's qualities (e.g. courage, cowardice, ambition, laziness) on the plot and the resolution of the conflict in a 6.4-6.6 level text.
	Identifies the details that explain a character's actions and feelings in a 6.4-6.6 level text.
	Identifies problems faced by the main character, and evaluates possible solutions in a 6.4-6.6 level text.
	Identifies multiple causes and effects and cause and effect relationships not directly stated in a 6.4-6.6 level text.
	Identifies descriptive language an author uses to describe a character in a 6.4-6.6 level text.
	Recognizes the difference between valid and faulty generalizations in a 6.4-6.6 level text.
	Makes and evaluates generalizations based on information in a 6.4-6.6 level text and personal experience.
	Distinguishes facts, supported inferences, and opinions in a 6.4-6.6 level informational text.
	Generates literal and inferential questions to guide the reading of a 6.4-6.6 level text before and during reading (sets a purpose).
	Draws and supports conclusions with evidence from a 6.4-6.6 level text.
	Makes inferences based on text information from a 6.4-6.6 level text and prior knowledge.
	Identifies the text information and personal knowledge used to make predictions and inferences about elements in a 6.4-6.6 level text.
	Makes, supports, and adjusts predictions with explicit and implicit evidence from 6.4-6.6 level fiction and non-fiction text.
	Makes personal connections and responds to 6.4-6.6 level text.
	Adjusts rate and style of reading to the purpose for reading and the nature of the material being read in a 6.1-6.3 level text.
	Monitors and clarifies understanding by adjusting reading rate, self-questioning, referring to graphics, rereading and reading ahead in level 6.1-6.3 text.
	Summarizes a 6.1-6.3 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.
	Summarizes a level 6.1-6.3 non-fiction text identifying the topic, main ideas and supporting details.
	Identifies the topic, multiple main ideas and supporting details of a level 6.1-6.3 text using titles, subtitles, visuals (photos, illustrations), captions, and text.

	Identifies the organization in paragraphs of a 6.1-6.3 level text: cause/effect, main ideas/details, sequence, hypothesis/support, compare/contrast.
	Identifies and determines the validity of generalizations in a 6.1-6.3 level text.
	Identifies text organized according to hypotheses/support in a 6.1-6.3 level text.
	Uses organization of text to recognize topic, main, idea and details in a 6.1-6.3 level text.
	Uses organization of text to recognize topic, main, idea and details in a 6.1-6.3 level text.
	Uses organization of text to recognize topic, main, idea and details in a 6.1-6.3 level text.
	Identifies and interprets visual images created by a poet.
	Identifies possible meanings of a poem.
	Identifies details about the culture from which a folktale came.
	Makes and evaluates judgments based on information in a 6.1-6.3 level text.
	Locates and interprets information in graphic aids in a 6.1-6.3 level text: maps, graphs, tables, captions, time lines and charts.
	Locates information using features of level 6.1-6.3 informational text: title page, table of contents, glossary, index, bibliography.
	Infers a character's emotions through details that indicate what a character sees, hears, and feels in a 6.1-6.3 level text.
	Identifies multiple problems and possible solutions faced by characters in a 6.1-6.3 level text.
	Identifies words, phrases, and verb tenses that indicate how events relate in time to one another in a 6.1-6.3 level text.
	Identifies the sequence of events (explicitly and implicitly stated) and words that signal sequential or simultaneous events in a 6.1-6.3 level text.
	Distinguishes fact from opinion in a 6.1-6.3 level text.
	Makes judgments and forms opinions about a character's values, actions, and decisions in a 6.1-6.3 level text.
	Creates a cause-effect chain for 3 or more story events from a 6.1-6.3 level text, e.g. Brian throws his hatchet -->it hits a stone wall --> sparks appear.
	Identifies characteristics of and examples of propaganda in a 6.1-6.3 level text.
	Identifies characteristics of the realistic fiction and expository nonfiction genres in a 6.1-6.3 level text.

	<p>Identifies the details that explain a character's actions and feelings, and add suspense in a 6.1-6.3 level text.</p> <p>Generates literal and inferential questions to guide the reading of a 6.1-6.3 level text before and during reading (sets a purpose).</p> <p>Draws and supports conclusions with evidence from a 6.1-6.3 level text.</p> <p>Identifies the text information and personal knowledge used to make inferences about elements in a 6.1-6.3 level text.</p> <p>Makes inferences based on text information from a 6.1-6.3 level text and prior knowledge.</p> <p>Identifies the text information and personal knowledge used to make predictions and inferences about elements in a 6.1-6.3 level text.</p> <p>Makes, supports, and adjusts predictions with explicit and implicit evidence from 6.1-6.3 level fiction and non-fiction text.</p> <p>Makes personal connections and responds to 6.1-6.3 level text.</p>
<p>Students have mastered Grade 5 Reading Comprehension</p>	<p>Uses multiple sources to locate and interpret information: nonfiction book, encyclopedia, dictionary, atlas, and almanac.</p> <p>Compares the accuracy and bias of multiple reference sources.</p> <p>Identifies the appropriate reference source to answer a specific question.</p> <p>Identifies and describes characteristics of structural patterns of informational text at a 5.7-5.9 level: compare/contrast, cause/effect, sequence, problem/solution.</p> <p>Monitors and clarifies understanding by adjusting reading rate, self-questioning, rereading and reading ahead in level 5.7-5.9 text.</p> <p>Adjusts rate and style of reading to the purpose for reading and the nature of the material being read in a 5.7-5.9 level text.</p> <p>Summarizes a 5.7-5.9 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.</p> <p>Summarizes a level 5.7-5.9 non-fiction text identifying the topic, main ideas and supporting details.</p> <p>Identifies the topic, multiple main ideas and supporting details of a level 5.7-5.9 text using titles, subtitles, visuals (photos, illustrations), captions, and text.</p> <p>Identifies and evaluates archetypal patterns and symbols found in myths and traditional stories in 5.7-5.9 level text.</p> <p>Evaluates the author's use of techniques to influence readers' perspectives in a 5.7-5.9 level text: appeal of characters, logic and credibility of plots and settings, use of figurative language.</p>

	Describes the function and effect of literary devices in a 5.7-5.9 level text: imagery, metaphor, and symbolism.
	Determines the theme or moral (implied or stated directly) in a 5.7-5.9 level text.
	Identifies imagery and figurative language in poetry.
	Determines the theme of a poem.
	Identifies generalizations and determines the validity of those generalizations in a 5.7-5.9 level text.
	Identifies facts and opinions in a 5.7-5.9 level text.
	Identifies more complex story structures such as multiple settings and stories within stories in a 5.7-5.9 level text.
	Identify characteristics of the memoir genre in a 5.7-5.9 level text.
	Identifies words and techniques an author uses to create excitement in a 5.7-5.9 level text.
	Identifies the author's purpose and viewpoint and statements that reveal the author's viewpoint in a 5.7-5.9 level text.
	Makes judgments about a character's decisions, actions, and values in a 5.7-5.9 level text.
	Evaluates propaganda techniques in a 5.7-5.9 level text.
	Identifies elements of propaganda and recognize propaganda techniques in a 5.7-5.9 level text.
	Use details to visualize characters and events, and to interpret a character's feelings in a 5.7-5.9 level text.
	Identifies words that signal compare and contrast (similarly, like, as, unlike, on the other hand, in contrast) and uses these words to compare and contrast story elements in a 5.7-5.9 level text.
	Locates information and predicts content using features of level 5.7-5.9 informational text: format, graphics, diagrams, table of contents, titles, charts, maps, graphs, index, glossary.
	Generates literal and inferential questions to guide the reading of a 5.7-5.9 level text before and during reading (sets a purpose).
	Draws and supports conclusions with evidence from a 5.7-5.9 level text.
	Makes inferences based on text information from a 5.7-5.9 level text and prior knowledge.
	Makes, supports, and adjusts predictions with explicit and implicit evidence from 5.7-5.9 level fiction and non-fiction text.
	Makes personal connections and responds to 5.7-5.9 level text.
	Adjusts rate and style of reading to the purpose for reading and the nature of the material being read in a 5.4-5.6 level text.

Monitors and clarifies understanding by adjusting reading rate, self-questioning, referring to graphics, rereading and reading ahead in level 5.4-5.6 text.

Summarizes a 5.4-5.6 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.

Summarizes a level 5.4-5.6 non-fiction text identifying the topic, main ideas and supporting details.

Identifies the topic, multiple main ideas and supporting details of a level 5.4-5.6 text using titles, subtitles, visuals (photos, illustrations), captions, and text.

Identifies visual images created by poetry.

Evaluate information for accuracy and bias in a 5.4-5.6 level text.

Compares and contrasts story elements in a 5.4-5.6 level text.

Identifies details that create a mood and indicate a character's emotions in a 5.4-5.6 level text.

Uses details to visualize characters, places, and events in a 5.4-5.6 level text.

Identifies problems faced by characters and evaluates possible solutions in a 5.4-5.6 level text.

Locates and follows multi-step directions in a 5.4-5.6 level text.

Compares information from primary and secondary sources.

Analyzes primary source documents to determine the type of information they provide.

Identifies cause and effect relationships (explicit and implicit) in a 5.4-5.6 level text.

Determines the validity of a generalization in a 5.4-5.6 level text.

Discriminates between generalizations and overgeneralizations in a 5.4-5.6 level text.

Differentiates the main idea of a paragraph from the details in a 5.4-5.6 level text.

Determines an author's purpose and viewpoint and identifies statements that reveal the viewpoint in a 5.4-5.6 level text or poem.

Generates literal and inferential questions to guide the reading of a 5.4-5.6 level text before and during reading (sets a purpose).

Draws and supports conclusions with evidence from a 5.4-5.6 level text.

Makes inferences based on text information from a 5.4-5.6 level text and prior knowledge.

Makes, supports, and adjusts predictions with explicit and implicit evidence from 5.4-5.6 level fiction and non-fiction text.

Makes personal connections and responds to 5.4-5.6 level text.

	Monitors and clarifies understanding by adjusting reading rate, self-questioning, referring to graphics, rereading and reading ahead in level 5.1-5.3 text.
	Summarizes a 5.1-5.3 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.
	Summarizes a 5.1-5.3 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.
	Summarizes a 5.1-5.3 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.
	Summarizes a level 5.1-5.3 non-fiction text identifying the topic, main ideas and supporting details.
	Summarizes a level 5.1-5.3 text graphically using a schedule, time line, or Venn diagram.
	Identifies the topic, multiple main ideas and supporting details of a level 5.1-5.3 text using titles, subtitles, visuals (photos, illustrations), captions, and text.
	Infers main ideas in a paragraph or selection that are not directly stated in a 5.1-5.3 level text.
	Predicts a character's future actions based on story events and prior knowledge in a 5.1-5.3 level text.
	Identifies cause and effect relationships (explicit and implied) in a 5.1-5.3 level text.
	Locates and interprets information using text features in a 5.1-5.3 level text: maps, charts, tables, graphs, and timelines.
	Identifies the characteristics of the folktale and autobiography genres in a 5.1-5.3 level text.
	Distinguishes facts from opinions and uses them to determine the author's point of view in a 5.1-5.3 level text.
	Distinguishes facts from opinions and uses them to determine the author's point of view in a 5.1-5.3 level text.
	Identifies techniques an author uses to create suspense in a 5.1-5.3 level text: words, details, and descriptive language.
	Defines the literary term "rising action" and identifies a chain of events that create suspense in a 5.1-5.3 level text.
	Determines whether a text is organized by sequence, main idea/details, or cause/effect in a 5.1-5.3 level text.
	Identifies characteristics of a news article: who, what, when, where, why, how.

	Uses guidewords and cross-references to find information in encyclopedias.
	Identifies characteristics of the realistic fiction and expository nonfiction genres in a 5.1-5.3 level text.
	Identifies examples of figurative language in a 5.1-5.3 level text: simile, metaphor, hyperbole, and personification.
	Identifies examples of figurative language in a 5.1-5.3 level text: simile, metaphor, hyperbole, and personification.
	Identifies the mood of a scene and the words, details, and descriptive language that create the mood in a 5.1-5.3 level text.
	Identifies when an author shifts from the present action to past events in a 5.1-5.3 level text.
	Sequences story events and identifies words that signal sequence (sequential and simultaneous events) in a 5.1-5.3 level text.
	Categorizes and classifies information in a 5.1-5.3 level text.
	Generates literal and inferential questions to guide the reading of a 5.1-5.3 level text before and during reading (sets a purpose).
	Draws and supports conclusions with evidence from a 5.1-5.3 level text.
	Makes inferences based on text information from a 5.1-5.3 level text and prior knowledge.
	Identifies the text information and personal knowledge used to make predictions about elements in a 5.1-5.3 level text.
	Makes, supports, and adjusts predictions with explicit and implicit evidence from 5.1-5.3 level fiction and non-fiction text.
	Makes personal connections and responds to 5.1-5.3 level text.
	Compares and contrasts information from several sources on the same topic.
	Locates and evaluates information from multiple reference materials: dictionary, encyclopedia, atlas, thesaurus, newspaper, and magazine.
	Identifies structural patterns and signal words of informational text organized according to cause/effect, problem/solution, or sequence in a 4.7-4.9 level text.
	Monitors and clarifies understanding by self-questioning, rereading and reading ahead in level 4.7-4.9 text.
	Summarizes a 4.7-4.9 level text naming main character, setting, plot (beginning, middle, end), problem/conflict, character's attempts to solve the problem, and resolution.
	Determines the causes for a character's actions using knowledge of situation, setting, and a character's traits and motivations in a 4.7-4.9 level text.
Students have mastered Grade 4 Reading Comprehension	

Identifies the main events of the plot, their causes, and their influence on future actions in a 4.7-4.9 level text.

Summarizes a level 4.7-4.9 non-fiction text identifying the topic, main ideas and supporting details.

Identifies the topic, multiple main ideas and supporting details of a level 4.7-4.9 text using titles, subtitles, visuals (photos, illustrations), captions, and text.

Identifies how supporting details explain the main idea in a 4.7-4.9 level text.

Identifies the main idea and supporting details of individual paragraphs using explicit and implicit ideas in a 4.7-4.9 level text.

Distinguishes between informational and persuasive texts at the 4.7-4.9 level.

Compares and contrasts visual images to written descriptions in a 4.7-4.9 level text.

Identifies words that signal generalizations in a 4.7-4.9 level text: most, generally, often, many, and usually.

Makes generalizations based on information in a 4.7-4.9 level text.

Resolves ambiguities due to multiple-meaning words by using context in a 4.7-4.9 level text.

Identifies the characteristics of a nonfiction magazine article.

Identifies the correct steps in a set of directions in a 4.7-4.9 level informational text.

Locates and interprets information using text features in a 4.7-4.9 level text: charts, diagrams, tables, maps, and keys.

Infers the author's underlying message in a 4.7-4.9 level text.

Identifies characteristics of the biography genre in a 4.7-4.9 level text.

Differentiates fact from opinion in a 4.7-4.9 level text.

Determines an author's viewpoint by analyzing information in a 4.7-4.9 level text.

Identifies features of text and the purpose for each feature in a 4.7-4.9 level text: chapter titles, quotations, photos, captions, key words.

Recognizes how a story changes with a shift in point of view in a 4.7-4.9 level text.

Identifies the point of view (first-person, third-person) in a 4.7-4.9 level text.

Identifies the sequence of story events and words that signal the sequence in a 4.7-4.9 level text.

Generates literal and inferential questions to guide the reading of a 4.7-4.9 level text before and during reading (sets a purpose).

Identifies cause and effect relationships (1 cause, multiple effects) in a 4.7-4.9 level text.

	<p>Draws and supports conclusions with evidence from a 4.7-4.9 level text.</p>
	<p>Makes inferences based on text information from a 4.7-4.9 level text and prior knowledge.</p>
	<p>Makes, supports, and adjusts predictions with explicit and implicit evidence from 4.7-4.9 level fiction and non-fiction text.</p>
	<p>Makes personal connections and responds to 4.7-4.9 level text.</p>
	<p>Monitors and clarifies understanding by adjusting reading rate, self-questioning, rereading and reading ahead in level 4.4-4.6 text.</p>
	<p>Summarizes a 4.4-4.6 level text naming main character, setting, plot (beginning, middle, end), problem, character's attempts to solve the problem, and solution.</p>
	<p>Summarizes a level 4.4-4.6 non-fiction text identifying the topic, main ideas and supporting details.</p>
	<p>Identifies the main idea and supporting details of a paragraph using explicit and implicit ideas in a 4.4-4.6 level text.</p>
	<p>Identifies the main idea and supporting details of a paragraph using explicit and implicit ideas in a 4.4-4.6 level text.</p>
	<p>Identifies the topic, multiple main ideas and supporting details of a level 4.4-4.6 text using titles, subtitles, visuals (photos, illustrations), captions, and text.</p>
	<p>Differentiates between major and minor story elements in a 4.4-4.6 level text.</p>
	<p>Identifies images that appeal to the senses in a 4.4-4.6 level text.</p>
	<p>Make judgments about story characters by considering advantages and disadvantages of their actions in a 4.4-4.6 level text.</p>
	<p>Recognizes elements of plot development in a 4.4-4.6 level text: introduction, problem/conflict, development, and resolution.</p>
	<p>Identifies elements of the expository nonfiction genre in a 4.4-4.6 level text.</p>
	<p>Identifies how words and illustrations work together to create mood in a 4.4-4.6 level text.</p>
	<p>Finds and sequences steps in a set of directions using time-order words (first, second, third, next, then, after, finally, last) in a 4.4-4.6 level text.</p>
	<p>Identifies details that indicate the setting (time and place) of a 4.4-4.6 level text.</p>
	<p>Identifies and evaluates the decision a character reaches in a 4.4-4.6 level text.</p>
	<p>Identifies the advantages and disadvantages of possible solutions to a character's problem in a 4.4-4.6 level text.</p>

	Identifies multiple problems and solutions in a 4.4-4.6 level text.
	Identifies characteristics of writing that expresses an opinion in a 4.4-4.6 level text.
	Identifies symbolic elements in a 4.4-4.6 level text, e.g. a spider web representing a character feeling trapped in a situation that keeps getting worse.
	Identifies elements of the realistic fiction genre in a 4.4-4.6 level text.
	Identifies elements of tall tale genre in a 4.4-4.6 level text.
	Identifies the point of view of a 4.4-4.6 level text.
	Generates literal and inferential questions to guide the reading of a 4.4-4.6 level text before and during reading (sets a purpose).
	Identifies elements of the fairy tale genre in a 4.4-4.6 level text.
	Compares and contrasts story elements and details within a 4.4-4.6 level text.
	Identifies poetic devices: sensory details, rhythm, rhyme (ending and internal), repetition, descriptive language, alliteration, and onomatopoeia.
	Identifies poetic devices: sensory details, rhythm, rhyme (ending and internal), repetition, descriptive language, alliteration, and onomatopoeia.
	Identifies clue words that indicate cause and effect in a 4.4-4.6 level text: because, so, since, and as a result.
	Identifies cause and effect relationships in 4.4-4.6 level text.
	Identifies elements of fantasy in a 4.4-4.6 level text.
	Identifies details that give clues about an author's viewpoint and a character's inner feelings in a 4.4-4.6 level text.
	Identifies important details that help to understand events, evaluate a character, and picture the setting in a 4.4-4.6 level text.
	Determines that different conclusions can be drawn with the same details in a 4.4-4.6 level text.
	Draws and supports conclusions with evidence from a 4.4-4.6 level text.
	Makes inferences based on text information from a 4.4-4.6 level text and prior knowledge, e.g. characters' emotions, actions.
	Makes supports, and adjusts predictions with explicit and implicit evidence from 4.4-4.6 level fiction and non-fiction text.
	Makes personal connections and responds to 4.4-4.6 level text.
	Monitors and clarifies understanding by adjusting reading rate, self-questioning, rereading and reading ahead in level 4.1-4.3 text.

Summarizes a 4.1-4.3 level text naming main character, setting, plot (beginning, middle, end), problem, character's attempts to solve the problem, and solution.

Summarizes a level 4.1-4.3 non-fiction text identifying the topic, main ideas and supporting details.

Identifies the topic, multiple main ideas and supporting details of a level 4.1-4.3 text using visuals (photos, illustrations), captions, and text.

Identifies characteristics of the narrative nonfiction and historical fiction genres in a 4.1-4.3 level text.

Identifies details that explain ideas, give information, or convey characters' feelings in a 4.1-4.3 level text.

Categorizes and classifies information in a 4.1-4.3 level text.

Makes generalizations based on details in a 4.1-4.3 level text.

Identifies clue words in a 4.1-4.3 level text that indicate generalizations: few, sometimes, usually, most, many, often

Differentiates important from less important details in a 4.1-4.3 level text.

Locates and interprets information from nonfiction text features: maps, time lines, schedules

Identifies the relationships between the topic, main ideas, and supporting details of a 4.1-4.3 level nonfiction text.

Identifies the purpose of nonfiction text features: chapter headings, subheadings, illustrations, and captions.

Recognizes characteristics of a haiku.

Identifies similes in a 4.1-4.3 level text.

Identifies similes in a 4.1-4.3 level text.

Identifies the sequence of story events and words that signal sequence (first, next, then, finally) in a 4.1-4.3 level text.

Determines author's viewpoint and purpose in a 4.1-4.3 level text based on text information directly stated or implied: stated opinion, word choice.

Defines academic language for plot elements: problem, rising action, climax, resolution.

Predicts outcomes beyond a 4.1-4.3 level text characters, events, and prior knowledge.

Predicts how changes in story structure can alter a story, e.g. different main character, different setting.

Identifies cause and effect relationships in a 4.1-4.3 level text.

Identifies clue words that signal cause and effect: because, so, since, as a result.

Identifies setting as time and place in a 4.1-4.3 level text.

Students have mastered Grade 3 Reading Comprehension		Generates literal and inferential questions to guide the reading of a 4.1-4.3 level text before and during reading (sets a purpose).
		Draws and supports conclusions with evidence from a 4.1-4.3 level text.
		Makes inferences based on text information from a 4.1-4.3 level text and prior knowledge, e.g. characters' emotions, actions, author's viewpoint, future events.
		Makes personal connections and responds to 4.1-4.3 level text.
		Makes, supports, and adjusts predictions with explicit and implicit evidence from 4.1-4.3 level fiction and non-fiction text.
		Locates information in reference materials: dictionary, atlas, newspaper, encyclopedia, and thesaurus.
		Monitors and clarifies understanding of level 3.7-3.9 text by adjusting reading rate, self-questioning, rereading, reading ahead, and using reference materials.
		Summarizes a 3.7-3.9 level text naming main character, setting, plot (beginning, middle, end), problem, character's attempts to solve the problem, and solution.
		Summarizes a level 3.7-3.9 non-fiction text identifying the topic, main ideas and supporting details.
		Identifies the topic, multiple main ideas and supporting details of a level 3.7-3.9 text using visuals (photos, illustrations), captions, and text.
		Generates literal and inferential questions to guide the reading of a 3.7-3.9 level text before and during reading (sets a purpose).
		Identifies characteristics of the historical fiction, narrative nonfiction, realistic fiction and play genres in a 3.7-3.9 level text.
		Identifies an author's use of imagery in a 3.7-3.9 level text.
		Recognizes the characteristics of a 3.7-3.9 level persuasive text.
		Identifies poetic devices: rhythm, rhyme (ending and internal), repetition, descriptive language, alliteration, and onomatopoeia.
	Identifies the mood of a story scene using details and descriptive language in a 3.7-3.9 level text.	
	Identifies the underlying theme or author's message in a 3.7-3.9 level text.	
	Identifies the author's purpose in a 3.7-3.9 level text.	
	Identifies possible solutions and chooses the best solution for a character's problem in a 3.7-3.9 level text.	
	Locates and identifies the function of specific expository text features: keys, maps, diagrams, charts, tables, time lines and graphs.	
	Sequence story events from a 3.7-3.9 level text.	

	Determines the main idea of a 3.7-3.9 level expository text using text features: title, headings, subtitles, main idea sentences, and graphics.
	Makes generalizations based on details in a 3.7-3.9 level text.
	Identifies clue words in a 3.7-3.9 level text that indicate generalizations: most, all, often, always, never.
	Makes judgments about a character's actions in a 3.7-3.9 level text based on text details and prior knowledge.
	Distinguishes historical facts and fictional elements in a 3.7-3.9 level historical fiction text.
	Identifies and infers cause and effect relationships in a 3.7-3.9 level text.
	Activates prior knowledge of the topic of a 3.7-3.9 level text by looking at the title and visuals (illustrations, charts, diagrams, etc.).
	Draws and supports conclusions with evidence from a 3.7-3.9 level text.
	Makes inferences based on text information from a 3.7-3.9 level text and prior knowledge, e.g. characters' emotions, motivations.
	Makes, supports, and modifies predictions with evidence from 3.7-3.9 level fiction and non-fiction text.
	Makes personal connections and responds to 3.7-3.9 level text.
	Monitors and clarifies understanding by adjusting reading rate, self-questioning, rereading and reading ahead in level 3.4-3.6 text.
	Summarizes a 3.4-3.6 level text naming main character, setting, plot (beginning, middle, end), problem, character's attempts to solve the problem, and solution.
	Evaluates a character's problem solving abilities in a 3.4-3.6 level text.
	Summarizes a level 3.4-3.6 non-fiction text identifying the topic, main ideas and supporting details.
	Identifies the topic, multiple main ideas and supporting details of a level 3.4-3.6 text using visuals (photos, illustrations), captions, and text.
	Generates literal and inferential questions to guide the reading of a 3.4-3.6 level text before and during reading (sets a purpose).
	Identifies characteristics of the folktale and legend genres in a 3.4-3.6 level text.
	Distinguishes fact from opinion in a 3.4-3.6 level text.
	Identifies the theme or author's message in a 3.4-3.6 level text.
	Identifies a character's perspective (from who's point of view is the story written) in a 3.4-3.6 level text.
	Sequences events from a 3.4-3.6 level text using explicit and implicit text information.
	Identifies text organization of expository text noting title, headings, paragraphs that identify the main idea, photos, and captions.

	Identifies and infers cause and effect relationships in a 3.4-3.6 level text.
	Identifies and uses parts of a 3.4-3.6 level text to locate information and predict content: title page, table of contents, index, and glossary.
	Activates prior knowledge of the topic of a 3.4-3.6 level text by looking at the title and visuals (illustrations, charts, diagrams, etc.).
	Draws and supports conclusions with evidence from a 3.4-3.6 level text.
	Makes inferences based on text information from a 3.4-3.6 level text and prior knowledge, e.g. characters' emotions.
	Makes, supports, and modifies predictions based on prior knowledge and evidence (explicit and implicit) from 3.4-3.6 level fiction and non-fiction text.
	Makes personal connections and responds to 3.4-3.6 level text.
	Monitors and clarifies understanding by self-questioning, rereading and reading ahead in level 3.1-3.3 text.
	Summarizes a 3.1-3.3 level text naming main character, setting, plot (beginning, middle, and end), problem, character's attempts to solve the problem, and solution.
	Summarizes a level 3.1-3.3 non-fiction text identifying the topic, main ideas and supporting details.
	Identifies the topic, multiple main ideas and supporting details of a level 3.1-3.3 text using visuals (photos, illustrations), captions, and text.
	Generates literal and inferential questions to guide the reading of a 3.1-3.3 level text before and during reading (sets a purpose).
	Identifies characteristics of the biography, fantasy, and poetry genres in a 3.1-3.3 level text.
	Reads and follows multiple-step instructions, e.g. a recipe, science experiment.
	Categorizes and classifies information from a 3.1-3.3 level text.
	Distinguishes fact from opinion in a 3.1-3.3 level text.
	Identifies the author's viewpoint and supports ideas with evidence from a 3.1-3.3 level text.
	Identifies a character's perspective (from who's point of view is the story written) in a 3.1-3.3 level text.
	Identifies important details that support the main idea and give information about the mood, characters, and setting of a 3.1-3.3 level text.
	Identifies and infers cause and effect relationships in a 3.1-3.3 level text.
	Resolves ambiguities related to multiple meaning words using the context of a 3.1-3.3 level text.

		Interprets information from expository text features: keys, maps, diagrams, charts, tables, and graphs.
		Identifies and uses parts of a 3.1-3.3 level text to locate information: title page, table of contents, index, and glossary.
		Activates prior knowledge of the topic of a 3.1-3.3 level text by looking at the title and visuals (illustrations, charts, diagrams, etc.).
		Identifies the author's message in a poem.
		Infers a character's traits based on character's speech, actions, thoughts, and feelings in a 3.1-3.3 level text.
		Sequences events from a 3.1-3.3 level text.
		Identifies clue words that indicate a sequence of events in a 3.1-3.3 level text: soon, next, then, at first, finally.
		Compares and contrasts two or more things in a 3.1-3.3 level text.
		Draws and supports conclusions with evidence from a 3.1-3.3 level text.
		Makes inferences based on text information from a 3.1-3.3 level text and prior knowledge, e.g. characters' emotions, actions.
		Makes and supports predictions with evidence from 3.1-3.3 level fiction and non-fiction text.
		Makes personal connections and responds to 3.1-3.3 level text.
Students have mastered Grade 2 Reading Comprehension		Locates and evaluates information about a topic from many sources: nonfiction books, magazines, encyclopedias, Internet, newspapers.
		Summarizes a 2.7-2.9 level text naming main character, setting, beginning, middle, end, problem, character's attempts to solve the problem, and solution.
		Summarizes a paragraph within a level 2.7-2.9 non-fiction text naming topic, main idea and supporting details.
		Monitors and clarifies understanding by adjusting reading rate, self-questioning, rereading and reading ahead in level 2.7-2.9 text.
		Generates clarifying questions (why, what if, how) while reading a 2.7-2.9 level text
		Generates literal and inferential questions to guide the reading of a 2.7-2.9 level text before and during reading (sets a purpose).
		Makes and supports generalizations with text evidence about characters and situations in a 2.7-2.9 level text.
		Identifies the topic of and locates information in 2.1-2.3 level text by using text features: titles, table of contents, chapter headings, and glossaries.
		Compares and contrasts story elements across 2.7-2.9 level texts.

		Identifies author's viewpoint in a poem and supports ideas with evidence from a poem.
		Identifies the author's viewpoint and purpose in a 2.7-2.9 level text.
		Makes and supports predictions about what may happen beyond a 2.7-2.9 level text.
		Identifies characteristics of the genre of biography.
		Identifies elements and the academic language of a play: script, cast, stage directions.
		Identify characteristics of the genres of realistic fiction and non-fiction magazine articles at a 2.7-2.9 level.
		Uses words that signal order to sequence instructions or events from a 2.7-2.9 level text, e.g. first, next, then, finally.
		Interprets a sequence of a events from a timeline in a 2.7-2.9 level text.
		Makes judgments about a characters' behavior in a 2.7-2.9 level text based on prior knowledge and values
		Makes inferences based on text information from a 2.7-2.9 level text and prior knowledge, e.g. characters' emotions.
		Draws and supports conclusions with evidence from a 2.7-2.9 level text.
		Makes, supports, and confirms predictions with evidence from 2.7-2.9 level fiction and non-fiction text.
		Makes personal connections and responds to 2.7-2.9 level text.
		Summarizes a 2.4-2.6 level text naming main character, setting, beginning, middle, end, problem, character's attempts to solve the problem, and solution.
		Summarizes a level 2.4-2.6 non-fiction text naming topic, main idea and supporting details.
		Identifies the topic, main idea and supporting details of a level 2.4-2.6 text using photos, captions, and text.
		Monitors and clarifies understanding by self-questioning, rereading and reading ahead in 2.4-2.6 level text.
		Generates literal and inferential questions to guide the reading of a 2.4-2.6 level text before and during reading (sets a purpose).
		Identifies characteristics of the genre of fables, e.g. animals acting like humans, a lesson.
		Recognizes and identifies different characters' viewpoints in illustrations, e.g. birds-eye view.
		Distinguishes facts and opinions in a 2.4-2.6 level text.
		Identifies characteristics of persuasive writing in a 2.4-2.6 level text.
		Identifies author's use of descriptive details in a 2.4-2.6 level text.
		Identifies elements of poetry: rhyme, rhythm, alliteration, verses.

		Identifies a single cause and multiple effects in a level 2.4-2.6 text.
		Makes and supports generalizations with facts from a 2.4-2.6 level text, e.g. Most firehouses are busy places.
		Sequences events using clues from a level 2.4-2.6 text (sequence is implied, not directly stated).
		Identifies author's use of elements to add emphasis: capital letters, exclamation marks, and ellipses in a level 2.4-2.6 text.
		Draws and supports conclusions with evidence from a 2.4-2.6 level text.
		Makes inferences based on text information from a 2.4-2.6 level text and prior knowledge, e.g. characters' emotions.
		Reads and follows 3-5 step written directions, e.g. how to make a paper airplane, following a recipe.
		Locates and interprets information from diagrams, schedules, calendars, maps, and charts in a 2.4-2.6 level text.
		Identifies elements of expository non-fiction text.
		Categorizes and classifies information from a 2.4-2.6 level text.
		Identifies author's use of descriptive language in a 2.4-2.6 level text.
		Distinguishes between fantasy and realism in a 2.4-2.6 level text.
		Compares and contrasts information from a 2.4-2.6 level text.
		Makes and supports predictions with evidence from 2.4-2.6 level fiction and non-fiction text.
		Makes personal connections and responds to 2.4-2.6 level text.
		Monitors and clarifies understanding by self-questioning, rereading and reading ahead in level 2.1-2.3 text.
		Summarizes a 2.1-2.3 level text naming main character, setting, beginning, middle, end, problem, and solution.
		Identifies facts and supporting details in a 2.1-2.3 level expository text.
		Identifies poetic devices of rhyme, rhythm, and descriptive language.
		Identifies the author's purpose in a 2.1-2.3 level expository text.
		Makes predictions about text content using features of a 2.1-2.3 level expository text: titles, table of contents, chapter headings, pictures, charts, and diagrams.
		Locates information in 2.1-2.3 level text by using text features: titles, table of contents, chapter headings, and glossaries.
		Makes inferences based on text, illustrations, and prior knowledge.
		Identifies the topic of a level 2.1-2.3 non-fiction text by looking at text features: title, headings, and captions.

		Draws logical conclusions about characters and events in a level 2.1-2.3 text using evidence from text and art.
		Identifies and supports examples of fantasy and real elements in a level 2.1-2.3 story.
		Locates and interprets information in charts and diagrams in a level 2.1-2.3 text.
		Identifies elements of a non-fiction text that explains how to do something.
		Follows two-step written instructions in a 2.1-2.3 level text.
		Identifies multiple problems and solutions in a level 2.1-2.3 text.
		Identifies cause and effect relationships in a level 2.1-2.3 text.
		Identifies the story structure of a level 2.1-2.3 text naming characters, setting, beginning, middle, and ending events.
		Summarizes segments of a level 2.1-2.3 text (beginning, middle, end).
		Makes and supports predictions with evidence from level 2.1-2.3 text.
		Makes personal connections to characters and events in 2.1-2.3 level text.
Students have mastered Grade 1 Reading Comprehension		Interprets information from a chart in a 1.7-1.9 level expository text.
		Identifies examples of cause and effect in a 1.7-1.9 level text.
		Identifies the sequence of events (beginning, middle, end) in a 1.7-1.9 level text.
		Makes predictions for a 1.7-1.9 level text based on characters' traits and previous actions.
		Resolves ambiguities in words and sentences due to multiple-meaning words by using context in a 1.7-1.9 level text.
		Uses action words from a 1.7-1.9 level text to visualize story events.
		Compares and contrasts characters and events in a 1.7-1.9 level text by recalling text details.
		Identifies rhymes and rhythm of a poem.
		Identifies the narrator of a level 1.7-1.9 text.
		Identifies the story structure of a 1.7-1.9 level story: characters, setting, problem, events (how character tries to solve problem), and ending (is the problem solved?).
		Compares and contrasts details across level 1.7-1.9 texts.
		Identifies the author's use of expressive language in a 1.7-1.9 level text.
		Identifies the mood of a 1.7-1.9 level text.
		Identifies important details in a 1.7-1.9 level text.
		Makes personal connections to characters and events in a 1.7-1.9 level text.

		Makes and confirms predictions for a 1.7-1.9 level text using evidence in the text and prior knowledge.
		Draws logical conclusions about possible outcomes in a 1.7-1.9 level text using text, pictures, and prior knowledge.
		Identifies describing words and descriptive language in a 1.7-1.9 level text.
		Summarizes a 1.7-1.9 level non-fiction text naming the topic, main idea and important details.
		Identifies the topic, main idea and details of a 1.7-1.9 level non-fiction text.
		Categorizes and classifies information in a 1.7-1.9 level text.
		Generates literal level questions about a 1.7-1.9 level text to guide the reading of the text before and during reading (sets a purpose).
		Makes and confirms predictions for a 1.4-1.6 level text using evidence in the text and prior knowledge.
		Identifies details in pictures and text of a 1.4-1.6 level text.
		Summarizes a 1.4-1.6 level story naming characters, setting, problem, events (how character tries to solve problem), and ending (is the problem solved?).
		Monitors and clarifies understanding by rereading and reading ahead in a 1.4-1.6 level text.
		Sequences the events of a 1.4-1.6 level text using the signal words <i>first</i> , <i>next</i> , and <i>last</i> .
		Compares and contrasts elements across 1.4-1.6 level texts, e.g. characters, settings, events.
		Compares and contrasts items in a 1.4-1.6 level text using a tool such as a Venn diagram.
		Draws conclusions about possible outcomes in a 1.4-1.6 level text using text, pictures, and prior knowledge.
		Categorizes and classifies objects in a 1.1-1.3 level text.
		Makes predictions based on evidence in a 1.1-1.3 level text and prior knowledge.
		Summarizes a 1.1-1.3 level non-fiction text naming the topic, main idea and a few details.
		Identifies the topic, main idea and supporting details of a 1.1-1.3 level non-fiction text.
		Summarizes a 1.1-1.3 level story naming the characters, setting, problem and how the main character tries to solve the problem.
		Identifies story structure elements of a 1.1-1.3 level story: character, setting, problem, and solution.
		Monitors and clarifies understanding by looking at picture information in a 1.1-1.3 level text.

		Identifies elements of fantasy and realistic text in a 1.1-1.3 level text.
		Generates literal level questions about a fiction or non-fiction text, level 1.1-1.3.
		Describes important details in a read aloud story.
		Describes important details in a picture.
		Identifies cause and effect relationships in a 1.1-1.3 level text (fiction and non-fiction).
		Identifies the cause and effect signal word "because."
		Identifies cause and effect relationships in a read aloud story.
		Identifies examples of cause and effect.
		Compares and contrasts elements across read aloud stories.
		Compares and contrasts characters within a read aloud story.
		Summarizes a read aloud text including the main idea, beginning, middle, and end.
		Identifies the main idea of a read aloud story.
		Identifies the beginning, middle, and end of a read aloud story.
		Identifies beginning, middle, and end of activities and events.
		Predicts story content using prior knowledge and text information (cover, title, illustrations).
Students have mastered Kindergarten Reading Comprehension		Identifies important details in a read aloud text.
		Sequences 3 steps in a process described in a read aloud information text.
		Identifies the main idea of a read aloud information text.
		Sets a purpose for reading by generating "I wonder" questions about story events prior to a read aloud story
		Identifies examples of cause and effect by looking at the pictures of a K- level book.
		Identifies examples of cause and effect in a read aloud picture book, fairy tale, or non-fiction text.
		Identifies the topic of a read aloud text by looking at the cover and title.
		Identifies the problem and solution in a read aloud story.
		Summarizes a read aloud story including characters, setting, and many details from the beginning, middle, and end.
		Makes a prediction about a K-level text's content based on title and illustrations throughout the text.
		Distinguishes fantasy from realistic text.

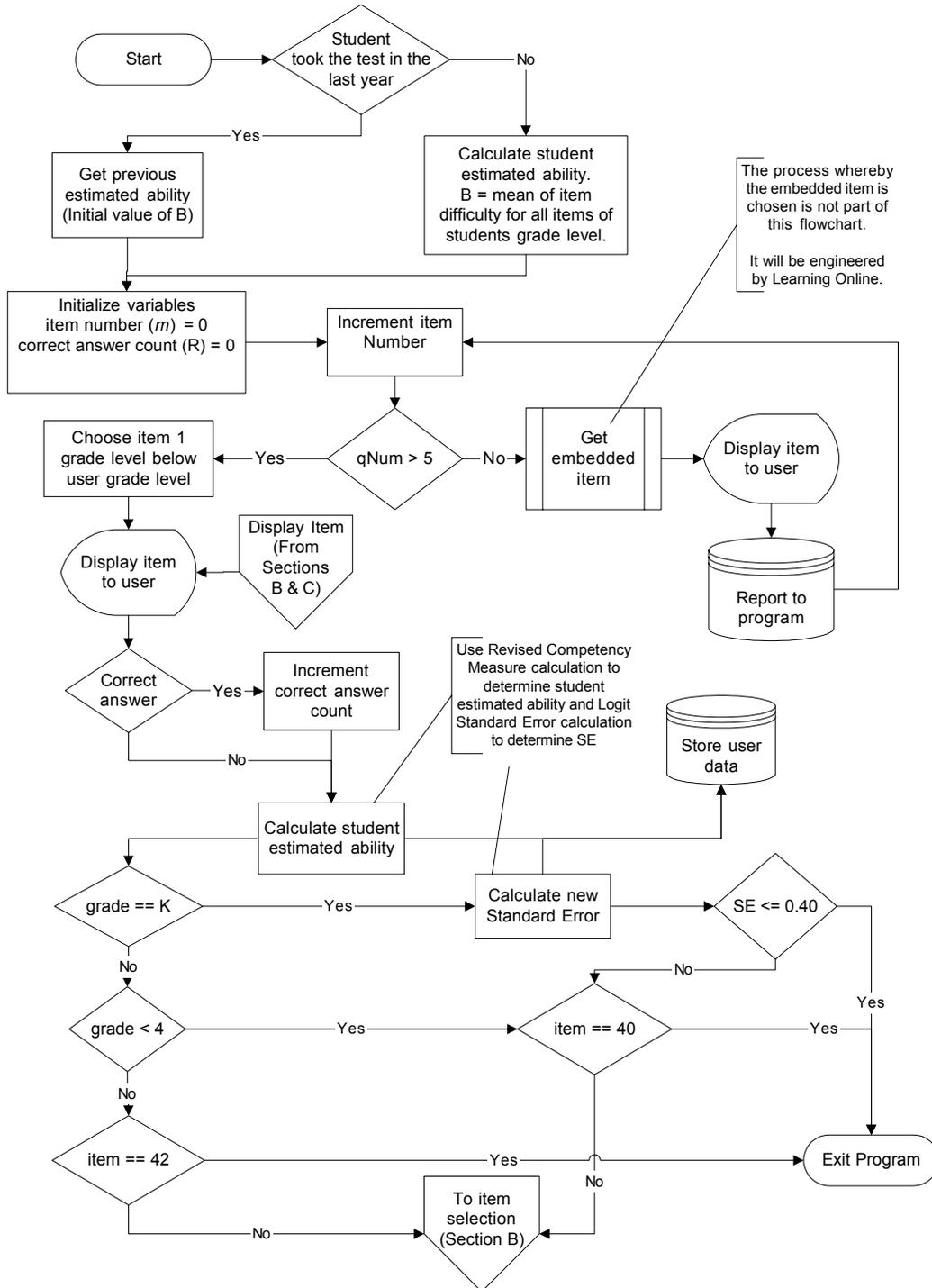
		Summarizes a read aloud picture or fairy tale including beginning, middle, and ending events in order.
		Identifies beginning, middle, and end of a read aloud picture book or fairy tale using pictures for support.
		Groups items in a read aloud story, e.g. food items (categorize/classify).
		Monitors understanding of a text by looking at pictures.
		Identifies characteristics of books that tell stories and those that give information.
		Makes personal connections to characters in a read aloud story.
		Generates one sentence how and why questions about a topic or story title.
		Identifies why something happens in a read aloud text.
		Determines cause and effect with pictures.
		Summarizes a read aloud picture book, fairy tale or non-fiction text with 2-3 details in some order.
		Identifies the main idea of a text read aloud.
		Makes inferences based on read aloud story pictures and prior knowledge.
		Draws a logical conclusion when given 2 facts.
		Names the characters and setting of a read aloud picture book or fairy tale.
		Summarizes a read aloud story (using pictures as prompts) giving 2-3 details which may not be in order.
		Retells a wordless picture book using the pictures for support.
		Supports predictions with picture information in a read aloud story.
		Predicts what will happen next during a read aloud picture book or fairy tale.
		Makes predictions about a read aloud text's content based on the text's title and cover.
		Identifies the sequence (first, then, and next) in a read aloud text.
		Sequences pictures of two events.
		Makes personal connections to events in a read aloud text.
		Notes details in a read aloud picture book, fairy tale, or non-fiction text.
		Compares and contrasts characters (people, animals) in a read aloud picture book, fairy tale, or non-fiction text.

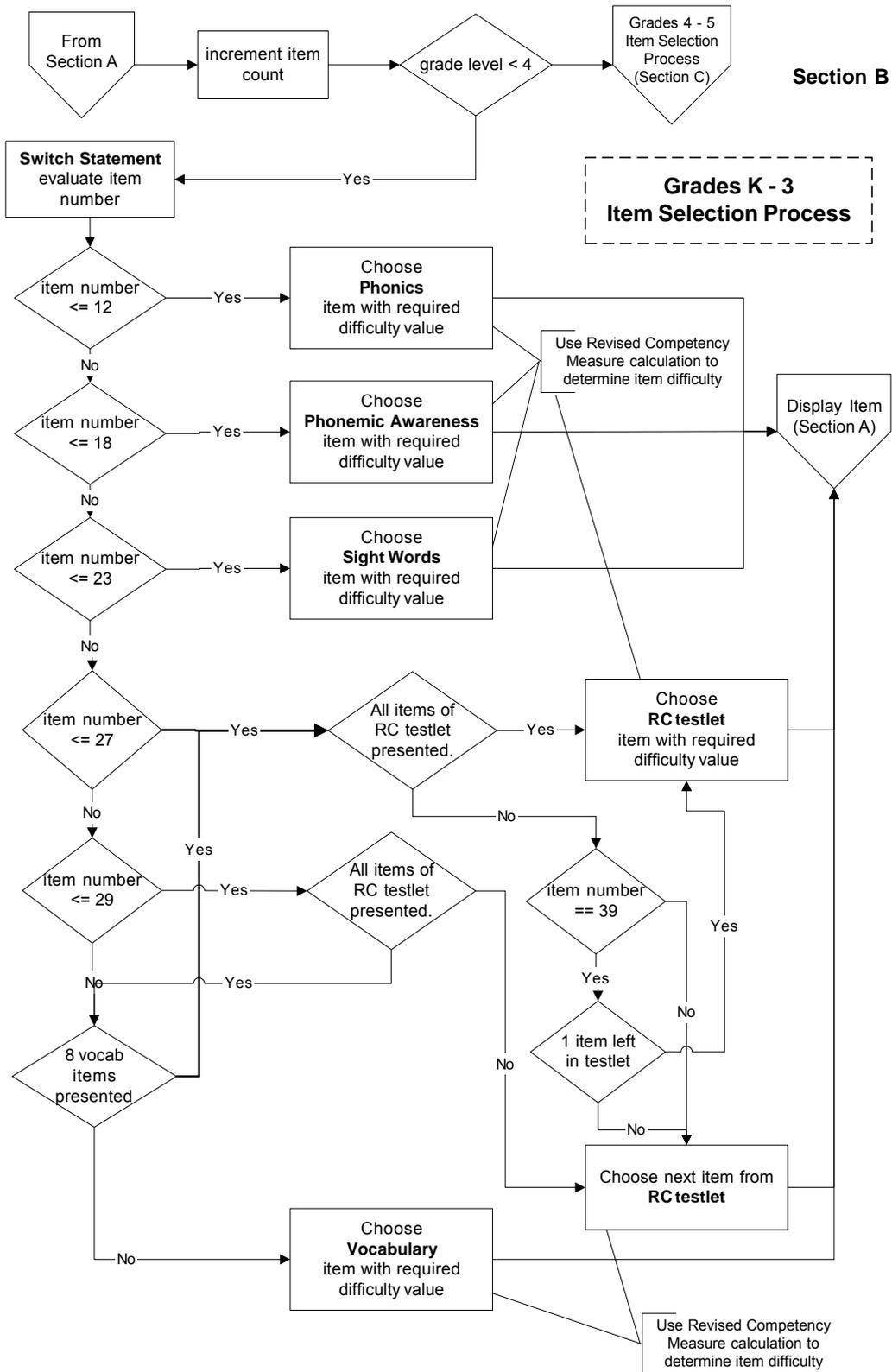
Lowest

Learning Today Assessment Flowcharts

Learning Today - Item Determination Flowchart

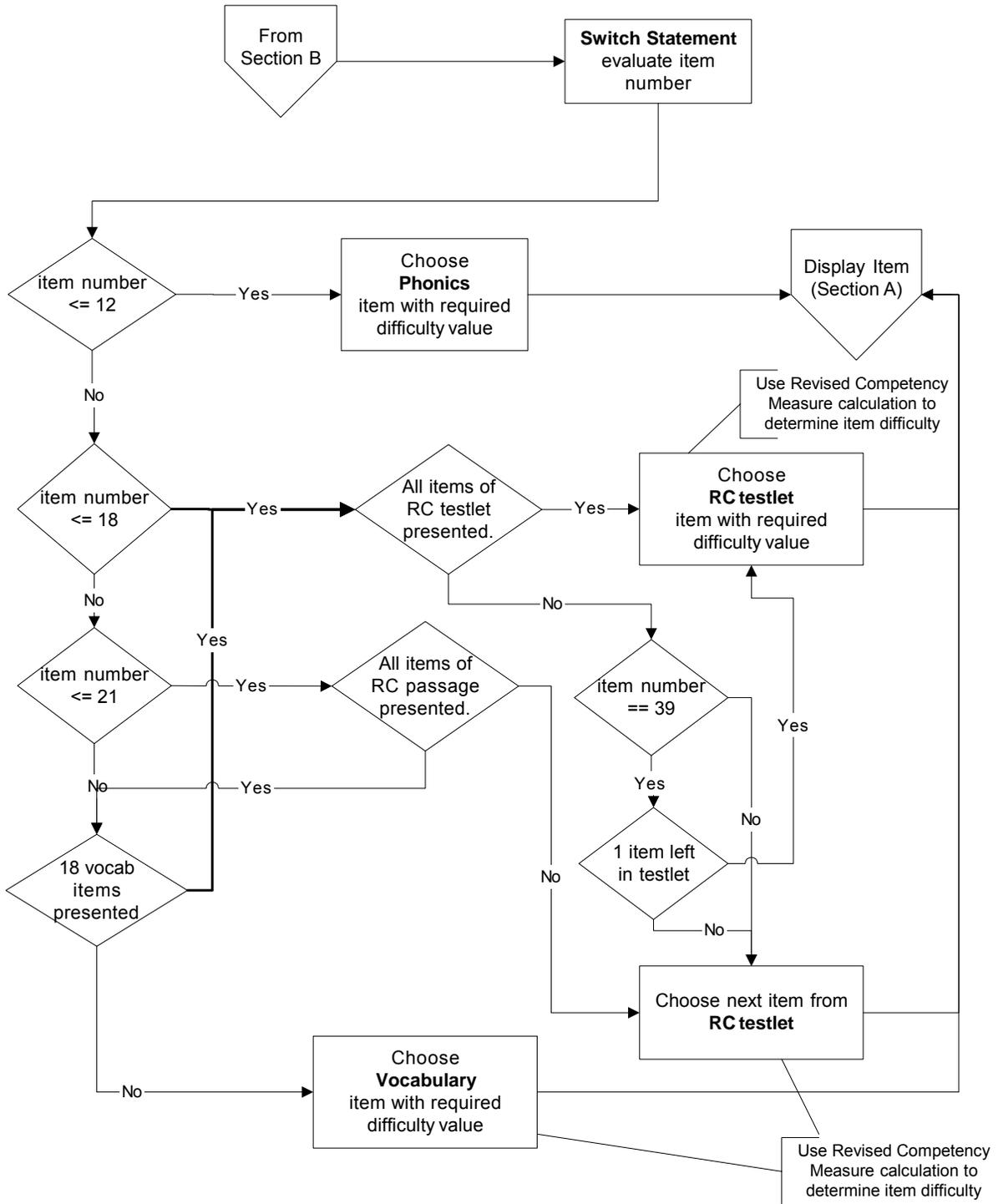
Section A





Grade 4 - 5 Item Selection Process

Section C



Learning Today Adaptive Assessment Scoring Algorithms

Probability of Success

$$P_{mi} = \frac{e^{(B_m - D_i)}}{1 + e^{(B_m - D_i)}}$$

B - (B_m) - estimated student ability level - number on the ability scale - changes after each item

D - (D_i) - item difficulty level - number on the ability scale

P - (P_{mi}) - probability of success of student for item

$$P = \log^{(B - D)} / (1 + \log^{(B - D)})$$

Revised Competency Measure

$$B_{m+1} = B_m + \frac{R_m - \sum_{i=1}^m P_{mi}}{\sum_{i=1}^m P_{mi} (1 - P_{mi})}$$

B - estimated student ability level

R - (R_m) - total number of items correct

PCUM - Summation of P_{mi}

$$PCUM = PCUM + P$$

$$PV = P * (1 - P)$$

$$PVCUM = PVCUM + PV$$

$$B = B + (R - PCUM) / PVCUM$$

Logit Standard Error

$$SE_{m+1} = \sqrt{\frac{1}{\sum_{i=1}^m P_{mi} (1 - P_{mi})}}$$

$$SE = \text{SQRT}(1/PVCUM)$$

Learning Today Assessment Sample Items

Sample Third Grade Mathematics Item

Which two places are the closest to each other?

		Deer Park		
Airport			Post Office	School
				Bob's House

Post Office and Airport

Airport and Deer Park

Bob's House and School

School and Post Office

DONE

Sample First Grade Mathematics Item

Click on the item you can buy with the exact amount of money shown.

Two quarters, three dimes, and five pennies.

40¢

65¢

25¢

DONE

Sample Third Grade Reading Composition Item

The Bus Boycott
In 1955, Rosa Parks was arrested because she would not give up her bus seat. Rosa was supposed to give up her seat because she was African American, and a white man wanted her seat.

That was the law. It was an unfair law. Many people wanted to change the law. They decided to boycott the buses. This means they did

Page 1 of 2

Why did the bus company lose money?

- Fewer people paid to ride the buses.
- Some people sat down on the buses.
- People snuck onto the buses and did not pay.
- Many people stole money from the bus drivers.

DONE

Sample Second Grade Phonics Item

Which answer correctly divides the word into syllables?

- bluebell
- bl / uebell
- blue / bell
- blu / ebell
- blueb / ell

DONE