

Evaluating the Alignment of the ITBS and ITED with Iowa's Academic Content Standards in
Reading and Mathematics at Grades 3, 5, 6, 7, 9, and 10

Report prepared for
Iowa State Department of Education

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Executive Summary

A project was undertaken to inform the Iowa Department of Education about how the Iowa Tests of Basic Skills (ITBS) and the Iowa Tests of Educational Development (ITED) aligned with Iowa's content standards in reading and mathematics. Panels of educators met in West Des Moines, Iowa on June 6-7, 2006. Their primary task was to evaluate how well items from the ITBS and ITED matched these state content standards in terms of content and cognitive complexity. For a standard to be deemed as adequately measured, a minimum of six items from the achievement test had to be aligned by consensus judgments of the panelists. This number of items may be minimally sufficient to make a single decision (e.g., mastery/non-mastery) about a student's performance. To evaluate the balance of coverage of the standards, panelists were asked to make their alignment judgments at the benchmark level. Iowa's benchmarks are subsumed within content and process standards.

For the 3rd, 5th, 6th, 7th, 9th and 10th grade reading standards, the ITBS (grades 3, 5, 6, and 7) and the ITED (grades 9 and 10) demonstrated strong evidence of alignment. Almost all items across grade levels were judged to align with Iowa's standards. Iowa's one reading content standard specifies two types of text for reading comprehension: literary texts and informational texts. Judgments were distributed across benchmarks pertaining to these two types of texts, which suggests that both were represented on the tests. Benchmarks reflecting students'

understanding of stated information and drawing conclusions from the text had more items judged as a match than others.

For the 3rd, 5th, 6th, 7th, 9th and 10th grade mathematics standards, the ITBS (grades 3, 5, 6, and 7) and the ITED (grades 9 and 10) also demonstrated strong evidence of alignment. The four content standards included both content and process standards. Judgments were generally distributed across these standards suggesting that most were represented on the tests. As shown in the body of this report almost all items on the mathematics subtests were judged to align with Iowa's content standards. Benchmarks reflecting students' understanding and application of number properties and operations (all grade levels), and understanding and application of problem-solving approaches and procedures (3rd, 5th, 6th, and 7th) had more items judged as a match than others.

The results of this project will be useful to the state department of education and to school districts as they evaluate their local curriculum and instruction. This report also serves as one source of independent validity evidence for the state regarding the alignment of their tests to the state standards.

Evaluating the Alignment of the ITBS and ITED with Iowa's Academic Content Standards in Reading, and Mathematics at Grades 3, 5, 6, 7, 9, and 10

Final Report

States are required to report to the U.S. Department of Education on how well students are performing on the state adopted content standards. Content standards in Iowa have been adopted for grades 3, 5, 6, 7, 9, and 10 in the content areas of Reading and Mathematics. Districts in Iowa administer the ITBS and ITED achievement tests and use the scores from such tests as one source of information for reporting how well students are performing on the standards. The purpose of this project was to identify the extent that the Iowa content standards in reading and mathematics could be measured by the ITBS and ITED at their respective grade levels. This study supplements an earlier study (October, 2005) conducted by Iowa's Department of Education for these content areas at grades 4, 8, and 11.

The results of this project will be useful to the state department of education and to school districts as they evaluate their local curriculum and instruction. This report also serves as independent validity evidence for the state regarding the alignment of their tests to the state standards.

Procedures

The achievement tests that the Iowa Department of Education is using to report students' performance on state content standards administered in Iowa were selected for this project, specifically the ITBS and ITED. The Iowa Testing Program provided copies of Forms A (operational) and B (practice) of these tests at the respective grade levels for the study.

Operational alignment judgments in this study were made on Form A. Because Form B is developed as an alternate form, it is reasonable to generalize the results of this study to the alternate form. Form B was used during the training activities to provide panelists an opportunity to practice with the process before making their operational judgments. The specific subtests considered for each grade level and content are shown in Table 1.

Thirty-eight educators participated in the study. Iowa Department of Education staff recruited these educators for the project and coordinated meeting logistics. The goal was to ensure that there were at least four to six participants for each grade level and content area panel. Each of the panels had a minimum of six participants. The criteria for panelist eligibility were that panelists have 1) content expertise and 2) familiarity with the population of students at the grade level tested.

At the meeting, panelists received a packet of materials that included an agenda, presentation notes, content standards that were unique to their respective content area, and alignment rating instructions. In addition to these materials, the packets contained the following forms: confidentiality/non-disclosure, demographic, practice ratings, operational ratings, and study evaluation. These forms were designed to collect panelists' information and judgments.

The 38 panelists had extensive experience in education. The mean for the full panel was 20.32 years with a median of 21.5 years. The educational attainment by the panel was also impressive. Eight panelists had bachelor's degrees, 16 panelists had master's degrees, one panelist had a specialist degree and 13 panelists had doctoral degrees. Panels generally contained a combination of classroom teachers, college instructors, content specialists, administrators, and assessment experts.

Iowa educators rated the level of alignment between the test items in the ITBS and ITED and the Iowa standards on both content and cognitive complexity. Special forms were prepared for this purpose. These forms showed the content standards' benchmarks in columns and test item numbers across the rows. Educators were asked to evaluate the degree of alignment between the item and the content standards using two rating scales. The first rating scale was used to represent the cognitive complexity of the benchmarks or items. This rating scale had four levels for benchmarks and three levels for items. These rating levels were:

Low level (L) – This level requires mainly recall, remembering factual information or definitions of terms, or the display of fairly routine skills. This level tends to deal with a single idea or procedure, require a display of concrete understanding, or ask for a demonstration of something learned directly from instruction.

Moderate level (M) – This level requires more intellectual skill than those characterized as “Low”, but may seem or feel like it is something less than “High.” This level may require the application of rules that are practiced extensively in the classroom, but to a new situation.

High level (H) – This level involves the application of ideas and procedures to solve problems or create new understandings. The situations are not habitual or routine; they are novel for most learners. Often multiple ideas are drawn upon or a high level of abstraction needs to be dealt with.

Unclassifiable (U) – [Note: May be applied to benchmarks only.] This level applies when a benchmark statement is worded so ambiguously that it is not possible to determine how students are expected to interact with the content. Sometimes it is the content that is described too generally, and sometimes it is the thinking process that is worded too indefinitely such that a range of cognitive complexity might be inferred from the benchmark. In situations like this, it seems best to code the benchmark as unclassifiable and then treat it as though it had been classified as moderate in summarizing the classifications.

The second rating scale was used to represent the degree of fit between the item and the benchmark. This rating scale included three varying levels of fit and one level where panelists could indicate that an item did not fit with a benchmark. These rating levels were:

X – No fit. The item does not directly match the content of any benchmark.

S – Slight fit. There is some relationship between the item content and the content of the benchmark, but much more is needed to answer the item correctly. Perhaps only one of the several pieces of content required to answer the item correctly is stated in the benchmark. Alignment would probably be more complete with some other benchmark, or it might take several benchmarks to cover the content of the item sufficiently. If an item has a slight fit with one benchmark, it may have a slight fit with another as well.

P – Partial fit. A significant portion of the content required to answer the item correctly is embodied in the benchmark. But there is additional, significant understanding required that is represented by some other benchmark. If the student gets the item right, it is because the student has some other significant knowledge that is *not* part of this benchmark.

C – Complete fit. The main content required to answer the item correctly is contained in the benchmark. If the student gets the item right, this fact is one relevant piece of information about the student's level of achievement of the content stated in the benchmark.

After an orientation session where the educators were informed of the purpose of the project and given an overview of the activities, the educators were divided into two groups by content area (reading and mathematics). These panels met in separate rooms. When they were in their respective rooms, the groups were further subdivided by grade level (3rd/5th, 6th/7th, and

9th/10th). The first activity in their subgroup was to review the content standard(s), benchmarks, cognitive complexity rating scale, and content matching rating scale. Following this review, panelists were given the opportunity to practice the rating process using the alternate form of their test (Form B). In the practice activity, panelists made judgments about the cognitive levels of the benchmarks and the six practice items. Panelists then made their ratings about the fit of the item to the benchmarks. Replicating the process they would use in the operational ratings, panelists made their initial judgment independently. The independent ratings were then followed by discussion among the panelists, which resulted in a consensus recommendation about the alignment judgments. These consensus judgments were made on separate rating forms than the independent judgments.

After the practice activities were completed, the Form B test booklets were collected and operational Form A booklets were distributed. Panelists then completed their operational ratings in a manner similar to the practice activity. The first round of ratings was completed independently followed by a consensus rating. Operational ratings for grades 3, 6, and 9 were conducted on the first day and operational ratings for grades 5, 7, and 10 were conducted on the second day. Following day two's operational ratings, panelists completed evaluation forms to collect evidence of procedural validity. Panelists were also given certificates to document their participation in this study that also served as a professional development opportunity. The meeting started the morning of June 6, 2006 and all activities were completed the afternoon of June 7, 2006.

Results

Reading

The results for Reading standards for each grade level are summarized in Table 2. This table reports the number of items that were judged to fit by benchmark. Because benchmarks are subsumed within standards, this table is designed to demonstrate the balance of the items across benchmarks. Note that for a given grade level there may be more items listed than items on the test. This situation occurred when items were judged to fit multiple benchmarks (e.g., multiple content, or content and process). This table only includes items that received a rating of “Complete” or “Partial” fit. Items that were judged to be a “Slight” fit were not included. The decision rule of six items for alignment represents a minimum number of items that may be needed to make a single decision about students’ performance (e.g., mastery/non-mastery). At the standard level, there was a minimum of six items for the reading standard.

At grade levels 3, 5, 6, 9, and 10, all items on the reading comprehension subtest were judged to match at least one benchmark within the reading standard. One item from grade 7 was identified as not matching any benchmarks. The distribution of items across benchmarks shows two to four benchmarks had at least six items matched to them. These data suggest that the items that were judged to measure the standards are reasonably balanced across the benchmarks. Results for individual reading items considered in this study are included in Appendix A of this report.

Mathematics

Table 3 summarizes the alignment results for the Mathematics standards. As was the case with the Reading standards results, this table reports the number of items that were judged to fit by benchmark. Because benchmarks are subsumed within standards, this table is designed

to demonstrate the balance of the items across benchmarks. Note that for a given grade level there may be more items listed than items on the test. This situation occurred when items were judged to fit multiple benchmarks (e.g., multiple content, or content and process). This table only includes items that received a rating of “Complete” or “Partial” fit. Items that were judged to be a “Slight” fit were not included. The decision rule of six items for alignment represents a minimum number of items that may be needed to make a single decision about students’ performance (e.g., mastery/non-mastery). At the standard level, there was a minimum of six items for each of the mathematics standards with one exception. For the 10th grade standard, *understand and apply methods of estimation*, four items were judged to match the standard.

Across grade levels, most items on the mathematics subtests were judged to match at least one benchmark within the four mathematics standards with two exceptions: grades six and seven each had a single item identified as not matching any benchmarks. The distribution of items across benchmarks shows that four to seven benchmarks had at least six items matched to them. These data suggest that the items that were judged to measure the standards are reasonably balanced across the benchmarks. Results for individual mathematics items considered in this study are included in Appendix B of this report.

Also of note was the panelists’ consideration of the cognitive complexity of one of the process benchmarks. The cognitive complexity of the benchmark that reflects students’ ability to solve problems was judged as *Unclassifiable* for grades 3, 4, 6, and 7. This means that the benchmark could be measured by items demonstrating a range of cognitive complexity (e.g., low, moderate, or high); therefore, the panelists could not concisely classify it at one particular cognitive level. This finding suggests that greater specificity in the benchmark may be needed to evaluate the cognitive complexity of items that are judged to measure it.

Evaluation

Following the operational ratings, panelists completed an evaluation form that was designed to measure their perceptions of the alignment training and activities. The purpose of the evaluation is to gather information that will contribute to the procedural validity evidence for the program and to provide feedback for facilitators for future workshops. The results for each section of the evaluation are provided below.

Part 1: Training

There were five questions on the evaluation form that focused on panelists' perceptions of the training aspects of the workshop. These five questions were rated on a scale from 1-6 where "1" was Very Unsuccessful and "6" was Very Successful. Intermediate score points were undefined. Panelists were generally positive about the training activities rating each of the aspects as a 4.9 or higher. Specifically, ratings on Orientation (5.3), Overview of the Standards (5.2), Discussion of the Benchmarks (4.9), Practice Rating Activity (5.4), and Overall Training (5.4) suggested that the training was successful.

The final question about the training inquired about the amount of time allocated to training. The scale for this item was 1 – Too little time allocated to training, 2 – Right amount allocated to training, and 3 – Too much time allocated to training. Panelists' average response was 2.2 suggesting that the average panelist believed that the right amount of time was allocated to training. Two panelists indicated that too much time was allocated to training and one panelist suggested that too little time was allocated.

Part 2: Alignment of items to content benchmarks

In this part of the evaluation, panelists rated their confidence with their cognitive complexity ratings for the benchmarks and the items and their alignment ratings. Each of these

items were rated on a four-point scale where 1 – Not at all confident, 2 – Not very confident, 3 – Somewhat confident, and 4 – Confident. Panelists were generally confident in their judgments about the cognitive complexity of the benchmarks (3.6). Similar confidence was observed in the results from their judgments of the cognitive complexity of the items (3.5) and their judgments of alignment of the items (3.6).

The final question in this section asked panelists how they felt about the time allocated to making these judgments. On a four-point scale where 1 – More time needed, 2 – Barely enough time, 3 – Sufficient time, and 4 – More than enough time, panelists' average rating was 3.6. This rating suggests that most panelists thought that there was between sufficient time and more than enough time allocated to make their ratings.

Overall evaluation

The final section of the evaluation asked panelists to provide an overall rating of the success and organization of the alignment study. Ratings on these two questions were on four-point scales where 1 – Total unsuccessful, 2 – Unsuccessful, 3 – Successful, and 4 – Totally successful. Panelists' average ratings were 3.4 and 3.6 on the success and organization questions respectively suggesting that most panelists were positive about their experience with the project. Panelists were also given an opportunity to provide any comments that might be useful in planning future studies. Comments related to the study are included as Appendix C.

Conclusions and Recommendations

The purpose of this project was to identify the extent that the Iowa content standards in reading, mathematics, and science could be measured by the ITBS and ITED at their respective grade levels. The results of this project suggest that the ITBS and ITED are well aligned with Iowa's content standards. These results will also be useful to the state department of education

and to school districts as they evaluate their local curriculum and instruction. Completion of this study by an independent organization provides another source of validity evidence for the state regarding the alignment of their tests to the state standards.

It was noted that the majority of panelists who participated in the study work in educational settings within close proximity to Des Moines. For future studies, the Iowa department of Education may wish to recruit panelists from additional areas of the state to ensure geographic representation. This will provide additional validity evidence to the process and interpretation of the results.

Table 1. Subtests Reviewed for ITBS and ITED by grade level and content area

Grade 3 (ITBS Level 9):

Reading

Reading Comprehension

Mathematics

Math Concepts and Estimation

Math Problem Solving and Data Interpretation

Grade 5 (ITBS Level 11):

Reading

Reading Comprehension

Mathematics

Math Concepts and Estimation

Math Problem Solving and Data Interpretation

Grade 6 (ITBS Level 12):

Reading

Reading Comprehension

Mathematics

Math Concepts and Estimation

Math Problem Solving and Data Interpretation

Grade 7 (ITBS Level 13):

Reading

Reading Comprehension

Mathematics

Math Concepts and Estimation

Math Problem Solving and Data Interpretation

Grade 9 (ITBS Level 15):

Reading

Reading Comprehension

Mathematics

Mathematics: Concepts and Problem Solving

Grade 10 (ITED Level 16):

Reading

Reading Comprehension

Mathematics

Mathematics: Concepts and Problem Solving

Table 2. Reading—Items by Benchmark Summary

3rd grade		Students can comprehend what they read in a variety of literary and informational texts.									
		Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret non-literal language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	No Fit
Benchmark cognitive level		L/L	M/M	H/H	M/H	H/H	M/H	M/M	M/L	H/H	
# of items		9	7	18	10	3	5	5	0	1	0

5th grade		Students can comprehend what they read in a variety of literary and informational texts.									
		Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret non-literal language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	No Fit
Benchmark cognitive level		L/L	M/M	H/H	M/H	H/H	M/H	M/M	M/L	H/H	
# of items		9	9	27	11	3	2	3	2	1	0

6th grade		Students can comprehend what they read in a variety of literary and informational texts.									
		Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret non-literary language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	No Fit
Benchmark cognitive level		L/L	M/M	H/H	H/U	H/H	H/H	M/M	H/H	H/H	
# of items		15	5	15	2	2	5	3	4	0	0

7th grade		Students can comprehend what they read in a variety of literary and informational texts.									
		Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret non-literary language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	No Fit
Benchmark cognitive level		L/L	M/M	H/H	H/U	H/H	H/H	M/M	H/H	H/H	
# of items		12	7	14	5	1	5	5	3	2	1

9th grade		Students can comprehend what they read in a variety of literary and informational texts.										
	Understand stated information they have read.	Determine the literal meaning of specific words.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters or individuals.	Make predictions based on stated information.	Interpret non-literary language used in a text.	Determine the main idea, topic, or theme and make generalizations.	Identify the writer's view or purposes.	Distinguish among facts, opinions, and assumptions.	Recognize aspects of a passage's style and structure and recognize literary techniques.		No Fit
Benchmark cognitive level	L/L	L/L	H/H	H/H	M/M	H/H	M/M	M/M	M/M	L/L		
# of items	14	5	10	6	0	4	4	6	0	1		0

10th grade		Students can comprehend what they read in a variety of literary and informational texts.										
	Understand stated information they have read.	Determine the literal meaning of specific words.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters or individuals.	Make predictions based on stated information.	Interpret non-literary language used in a text.	Determine the main idea, topic, or theme and make generalizations.	Identify the writer's view or purposes.	Distinguish among facts, opinions, and assumptions.	Recognize aspects of a passage's style and structure and recognize literary techniques.		No Fit
Benchmark cognitive level	L/L	L/L	H/H	H/H	M/M	H/H	M/M	M/M	M/M	L/L		
# of items	4	3	15	9	0	5	3	6	0	2		0

Table 3. Mathematics—Item by Benchmark Summary

3rd grade		Understand and apply a variety of math concepts.					Understand and apply methods of estimation.	Solve a variety of math problems.		Interpret data presented in a variety of ways.		
	Understand and apply number properties and operations.	Understand and apply concepts and procedures of algebra.	Understand and apply concepts of geometry.	Understand and apply concepts of measurement.	Understand and apply concepts in probability and statistics.	Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit	
Benchmark cognitive level	L/M	M/H	LM	M/M	H/H	M/H	U	H	M	H		
# items - concepts & estimation	13	1	3	7	2	7	1	1	2	6	0	
# items - problem solving	13	0	0	0	0	0	0	15	8	6	0	

5th grade		Understand and apply a variety of math concepts.					Understand and apply methods of estimation.	Solve a variety of math problems.		Interpret data presented in a variety of ways.		
	Understand and apply number properties and operations.	Understand and apply concepts and procedures of algebra.	Understand and apply concepts of geometry.	Understand and apply concepts of measurement.	Understand and apply concepts in probability and statistics.	Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit	
Benchmark cognitive level	L/M	M/H	L/M	M/M	H/H	M/H	U	H	H	H		
# items - concepts & estimation	20	2	5	7	3	9	1	4	1	7	0	
# items - problem solving	14	0	0	2	0	1	0	16	8	4	0	

6th grade		Understand and apply a variety of math concepts.					Understand and apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
		Understand and apply number properties and operations.	Understand and apply concepts and procedures of algebra.	Understand and apply concepts of geometry.	Understand and apply concepts of measurement.	Understand and apply concepts in probability and statistics.	Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit
Benchmark cognitive level	L/M	L/M	L/M	L/M	L/M	L/M	U	H	M	H		
# items - concepts & estimation	13	4	4	4	4	12	0	9	1	0	1	
# items - problem solving	6	1	0	1	0	2	0	20	15	0	0	

7th grade		Understand and apply a variety of math concepts.					Understand and apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
		Understand and apply number properties and operations.	Understand and apply concepts and procedures of algebra.	Understand and apply concepts of geometry.	Understand and apply concepts of measurement.	Understand and apply concepts in probability and statistics.	Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit
Benchmark cognitive level	L/M	L/M	L/M	L/M	L/M	L/M	U	H	M	H		
# items - concepts & estimation	16	7	4	4	4	15	0	5	1	0	1	
# items - problem solving	4	0	0	1	1	1	0	22	16	1	0	

9th grade		Understand and apply a variety of math concepts.				Understand and apply methods of estimation.	Solve a variety of math problems.		Interpret data presented in a variety of ways.		
	Understand and apply number properties and operations.	Understand and apply concepts and procedures of algebra.	Understand and apply concepts of geometry and measurement.	Understand and apply concepts in probability and statistics.	Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems requiring multiple steps and operations.	Reason quantitatively.	Make inferences based on data presented in a variety of ways.	Interpret data from a variety of sources.	No Fit	
Benchmark cognitive level	L/M	L/M	L/H	L/H	L/M	H	H	H	H		
# items	20	3	8	4	9	10	6	1	8	0	

10th grade		Understand and apply a variety of math concepts.				Understand and apply methods of estimation.	Solve a variety of math problems.		Interpret data presented in a variety of ways.		
	Understand and apply number properties and operations.	Understand and apply concepts and procedures of algebra.	Understand and apply concepts of geometry and measurement.	Understand and apply concepts in probability and statistics.	Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems requiring multiple steps and operations.	Reason quantitatively.	Make inferences based on data presented in a variety of ways.	Interpret data from a variety of sources.	No Fit	
Benchmark cognitive level	L/M	L/M	L/H	L/H	L/M	H	H	H	H		
# items	18	3	8	1	4	7	7	0	14	0	

3 rd Grade Reading		Students can comprehend what they read in a variety of literary texts.									Students can comprehend what they read in a variety of informational texts.										
ITEM NUMBER	Item Cognitive Complexity	Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret nonliteral language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret nonliteral language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	NO FIT	
G. Consensus		L	M	H	M	H	M	M	M	H	L	M	H	H	H	H	M	L	H		
1	M			P	P																
2	M	P		P																	
3	L	C																			
4	M		P	P																	
5	M	C																			
6	H			P			P														
7	M		P		P																
8	M							C													
9	H												P		P						
10	M													P							
11	H											P	P								
12	M															C					
13	H			P	P																
14	L	C																			
15	M		C																		
16	M	P		P																	
17	H			P	P																

18	H												C							
19	H												P		P					
20	M											P					P			
21	H												P	P						
22	M																	C		
23	L											C								
24	M											P				P				
25	M											P		P						
26	L											C								
27	M																		C	
28	H			P	P															
29	L	C																		
30	H			P	P															
31	H			P	P															
32	M		C																	
33	H											C								
34	H			P				P												
35	H			P				P												
36	H							C												
37	H				P			P												

5 th Grade Reading		Students can comprehend what they read in a variety of literary texts.									Students can comprehend what they read in a variety of informational texts.										
ITEM NUMBER	Item Cognitive Complexity	Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret nonliteral language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret nonliteral language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	NO FIT	
G. Consensus		L	M	H	M	H	M	M	M	H	L	M	H	H	H	H	M	L	H		
1	M												C								
2	M											P	P								
3	H											P	P								
4	M											P	P								
5	M										P		P								
6	M											P	P								
7	M										P			P							
8	M												P			P					
9	M		P		P																
10	M	P				P															
11	H			P	P																
12	M	P		P																	
13	H			C																	
14	M			C																	
15	H			P	P																
16	M															C					

17	M												P	P						
18	L									C										
19	M									P	P									
20	M									P		P								
21	L																	C		
22	M											C								
23	H											P				P				
24	M										P	P								
25	H														C					
26	M																		C	
27	M																	C		
28	M	P		P																
29	M				C															
30	H					C														
31	M			P	P															
32	M						C													
33	M		P	P																
34	H			P	P															
35	H			P	P															
36	M			P	P															
37	H			P	P															
38	M		C																	
39	M				P			P												
40	M												C							
41	H												C							
42	L									C										
43	H												P		P					

6th Grade Reading		Students can comprehend what they read in a variety of literary texts.									Students can comprehend what they read in a variety of informational texts.										
ITEM NUMBER	Item Cognitive Complexity	Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret nonliteral language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret nonliteral language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	NO FIT	
G. Consensus		L	M	H	H	H	H	M	H	H	L	M	H	U	H	H	M	H	H		
1	M										P		P								
2	M												C								
3	L										C										
4	H														C						
5	L										C										
6	H																	C			
7	M										P		P								
8	H											P	P								
9	L										C										
10	H														C						
11	L	C																			
12	M			C																	
13	H						C														
14	H								C												
15	M							C													
16	L	C																			

17	M			C																
18	M				C															
19	M			C																
20	M				C															
21	M					C														
22	H						C													
23	M														C					
24	L								C											
25	M										C									
26	M									C										
27	L								C											
28	H										C									
29	M															C				
30	L								C											
31	L								C											
32	M								P		P									
33	M										P		P							
34	H														C					
35	M									C										
36	L								C											
37	M										C									
38	M									C										
39	H										C									
40	H										C									
41	H																		C	
42	M									P	P									
43	L								C											
44	L								C											
45	M															C				

7 th Grade Reading		Students can comprehend what they read in a variety of literary texts.									Students can comprehend what they read in a variety of informational texts.									
ITEM NUMBER	Item Cognitive Complexity	Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret nonliteral language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	Understand stated information they have read.	Determine the meaning of new words from their context.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters.	Interpret information in new contexts.	Interpret nonliteral language used in a text.	Determine the main idea of a text.	Identify the writer's view or purpose.	Analyze style or structure.	NO FIT
G. Consensus		L	M	H	H	H	H	M	H	H	L	M	H	U	H	H	M	H	H	
1	M										P									
2	M												C							
3	M												C							
4	M											C								
5	M										C	C								
6	M												C							
7	M																C			
8	M										P					P				
9	L										C									
10	L										C									
11	M												C							
12	H													C						
13	M											C								
14	L										C									
15	M												C							
16	M											C								
17	M												C							
18	L										C									
19	H																	C		
20	M											C								

21	L										C								
22	L										C								
23	M																C		
24	M												C						
25	H													C					
26	M													C					
27	L										C								
28	M											C							
29	H												C						
30	L										C								
31	H												P					P	
32	M																	C	
33	M										P	P							
34	M												C						
35	H																	C	
36	H																		X
37	L			C															
38	M				C														
39	M						C												
40	H									C									
41	H			P	P														
42	M				C														
43	H			P							P								
44	M									C									
45	H							C											
46	H				P			C	P										
47	H		P					C	P										
48	H								C										

9 th Grade Reading		Students can comprehend what they read in a variety of literary texts.										Students can comprehend what they read in a variety of informational texts.										
ITEM NUMBER	Item Cognitive Complexity	Understand stated information they have read.	Determine the literal meaning of specific words.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters or individuals.	Make predictions based on stated information.	Interpret nonliteral language used in a text.	Determine the main idea, topic, or theme and make generalizations.	Identify the writer's view or purposes.	Distinguish among facts, opinions, and assumptions.	Recognize aspects of a passage's style and structure and recognize literary techniques.	Understand stated information they have read.	Determine the literal meaning of specific words.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters or individuals.	Make predictions based on stated information.	Interpret nonliteral language used in a text.	Determine the main idea, topic, or theme and make generalizations.	Identify the writer's view or purposes.	Distinguish among facts, opinions, and assumptions.	Recognize aspects of a passage's style and structure and recognize literary techniques.	NO FIT
G. Consensus		L	L	H	H	M	H	M	M	M	L	L	L	H	H	M	H	M	M	M	L	
1	L											C										
2	L												C									
3	M											P		P								
4	M											C										
5	M													C								
6	L											C										
7	L											C										
8	L											P		P								
9	M																		C			
10	L											C										
11	M														P		P					
12	M																		C			
13	M												C									
14	L											C										
15	M																C					
16	M													C								
17	M													C								
18	M																C					

10 th Grade Reading		Students can comprehend what they read in a variety of literary texts.										Students can comprehend what they read in a variety of informational texts.										
ITEM NUMBER	Item Cognitive Complexity	Understand stated information they have read.	Determine the literal meaning of specific words.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters or individuals.	Make predictions based on stated information.	Interpret nonliteral language used in a text.	Determine the main idea, topic, or theme and make generalizations.	Identify the writer's view or purposes.	Distinguish among facts, opinions, and assumptions.	Recognize aspects or a passage's style and structure and recognize literary techniques.	Understand stated information they have read.	Determine the literal meaning of specific words.	Draw conclusions, make inferences, and deduce meaning.	Infer traits, feelings, and motives of characters or individuals.	Make predictions based on stated information.	Interpret nonliteral language used in a text.	Determine the main idea, topic, or theme and make generalizations.	Identify the writer's view or purposes.	Distinguish among facts, opinions, and assumptions.	Recognize aspects or a passage's style and structure and recognize literary techniques.	
G. Consensus		L	L	H	H	M	H	M	M	L		L	L	H	H	M	H	M	M	M	L	
1	M			P	P																	
2	M				C																	
3	M								C													
4	H						C															
5	L	C																				
6	H						C															
7	M				C																	
8	M				P					P												
9	M								C													
10	M														C							
11	M											C										
12	L										C											
13	M													C								
14	M													C								
15	M											C										
16	M													C								
17	M																		C			

3 rd Grade Math: MC&E		Understand a variety of math concepts.					Apply a variety of math concepts.					Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.		No Fit	
		ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry.	Understand concepts of measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry.	Apply concepts of measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.		Understand and apply problem-solving approaches and procedures.
G. Consensus		L	M	L	M	H	M	H	M	M	H	M	H	U	H	M	H	
1	L																C	
2	L						P				P							
3	L	C																
4	L						C											
5	M			C														
6	L	C																
7	M									P								P
8	M				C													
9	L	C																
10	M										P						P	
11	M						P	P										
12	L	C																
13	M									P								P
14	L													C				

15	L	C																
16	L	C																
17	M									C								
18	H							C										
19	M						P			P								
20	L	C																
21	H								C									
22	M						P								P			
23	M						C											
24	M				P					P								
25	L												P				P	
26	M												C					
27	M												P				P	
28	M												P				P	
29	M												P				P	
30	L												C					
31	M												P				P	

3 rd Grade Math: PS&DI		Understand a variety of math concepts.					Apply a variety of math concepts.					Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry.	Understand concepts of measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry.	Apply concepts of measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit
G. Consensus		L	M	L	M	H	M	H	M	M	H	M	M	U	H	M	H	
1	L															C		
2	L															C		
3	M						P									P		
4	H						P									P		
5	L						P							P				
6	M						P							P				
7	H													C				
8	L						P							P				
9	L						P							P				
10	L						P							P				
11	M						P							P		P		
12	M						P							P		P		
13	H						P							P		P		
14	M						P							P		P		
15	L													C				

16	M														P	P		
17	H														P	P		
18	L						C											
19	L	P													P			
20	M														C			
21	L															P	S	
22	L															P	S	

5 th Grade Math: MC&E		Understand a variety of math concepts.					Apply a variety of math concepts.					Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry.	Understand concepts of measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry.	Apply concepts of measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit
G. Consensus		L	M	L	M	H	M	H	M	M	H	M	H	U	H	H	H	
1	L	C																
2	L	C																
3	L	C																
4	M						C											
5	M						P						P					
6	L						C											
7	L				S		P											
8	L			C														
9	L						P								S			
10	M														C			
11	L								P								P	
12	M						C											
13	L				P				P									
14	M							C										

15	M						P	P										
16	M						P	P										
17	L						C											
18	M			C														
19	L									C								
20	L	C																
21	L	C																
22	M						P									P		
23	H									P						P		
24	M						P			P							P	
25	M								P			S			P			
26	M				C													
27	M						P			P								
28	M			P						P								
29	M						C											
30	M						C											
31	L				C													
32	L											P					P	
33	L											C						
34	L											P					P	
35	M											P					P	
36	L											P					P	
37	M											C						
38	L											C						
39	M											P					P	
40	L											P					P	

5 th Grade Math: PS&DI		Understand a variety of math concepts.					Apply a variety of math concepts.					Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry.	Understand concepts of measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry.	Apply concepts of measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit
G. Consensus		L	M	L	M	H	M	H	M	M	H	M	H	U	H	H	H	
1	M						P									P		
2	M															C		
3	M						P								P			
4	M														C			
5	L	S													S		P	
6	M						P					S			P			
7	L															C		
8	L															C		
9	L						P									P		
10	M						P								P			
11	M						P	S							P			
12	L	P													P			
13	L						P								P		P	
14	M								P						P		P	

15	M						P							P		P	
16	L										P			P			
17	L														C		
18	M														C		
19	M														C		
20	L						P							S			
21	L	P												P			
22	L						P							P			
23	M						P			P				P			
24	L													C			
25	L													C			
26	L						P							P			

6 th Grade Math: MC&E		Understand a variety of math concepts.					Apply a variety of math concepts.					Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry.	Understand concepts of measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry.	Apply concepts of measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit
G. Consensus		L	L	L	L	L	M	M	M	M	M	L	M	U	H	M	H	
1	M						P	P										
2	L	C																
3	L			C														
4	M					C												
5	L						C											
6	L						C											
7	M														C			
8	M									P					P			
9	M							C										
10	M														C			
11	M			P											P			
12	L						C											
13	L			C														
14	M						C											

15	M						C												
16	L				C														
17	L										C								
18	L				C														
19	M									P				P					
20	M										C								
21	M							C											
22	L	C																	
23	M						C												
24	M																		X
25	M						P								P				
26	M						P	P											
27	L	C																	
28	M						C												
29	M										C								
30	L			C															
31	H						C												
32	M		C																
33	L				C														
34	L													C					
35	M													P		P			
36	L													C					
37	M													P		P			
38	M													P		P			
39	M													P			P		
40	M													C					
41	M													C					
42	M													P		P			
43	L													C					

6 th Grade Math: PS&DI		Understand a variety of math concepts.					Apply a variety of math concepts.					Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.		No Fit
		Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry.	Understand concepts of measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry.	Apply concepts of measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	
ITEM NUMBER	Item Cognitive Complexity																
G. Consensus		L	L	L	L	L	M	M	M	M	M	L	M	U	H	M	H
1	M														P	P	
2	M														P	P	
3	M														P	P	
4	L										C						
5	L															C	
6	M															C	
7	H															C	
8	L						P								P		
9	H														C		
10	L														C		
11	M														C		
12	L															C	
13	M														P	P	

14	M														P	P		
15	L															C		
16	H														P	P		
17	H														P	P		
18	L								P						P			
19	L														C			
20	L	P													P			
21	L							P							P			
22	L															C		
23	H											S			P	P		
24	H															C		
25	L						P								P			
26	M						P								P			
27	M						P								P			
28	H						P								P			

7 th Grade Math: MC&E		Understand a variety of math concepts.					Apply a variety of math concepts.					Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.		No Fit	
		ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry.	Understand concepts of measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry.	Apply concepts of measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.		Understand and apply problem-solving approaches and procedures.
G. Consensus		L	L	L	L	L	M	M	M	M	M	L	M	U	H	M	H	
1	M							C										
2	L				C													
3	M									P			P					
4	L										C							
5	M	P	P															
6	L	C																
7	M						C											
8	M																	X
9	M						P						P					
10	M							C										
11	L	C																
12	M						C											
13	M										C							
14	L			C														
15	H						C											

16	M		C															
17	L				C													
18	M								C									
19	L						C											
20	M										C							
21	M						C											
22	L						C											
23	L								P								P	
24	L						C											
25	M	C																
26	L						C											
27	M						P				P							
28	H								C									
29	L								C									
30	L										C							
31	M								C									
32	L	C																
33	L						P	P										
34	M										C							
35	H							P									P	
36	M											P					P	
37	L											C						
38	M											C						
39	L											C						
40	L											C						
41	M											P					P	
42	L											C						
43	L											P					P	
44	M											C						
45	M											P					P	
46	L											C						

7 th Grade Math: PS&DI		Understand a variety of math concepts.					Apply a variety of math concepts.					Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry.	Understand concepts of measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry.	Apply concepts of measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems.	Understand and apply problem-solving approaches and procedures.	Use tables and graphs to locate and read information.	Interpret data from a variety of sources.	No Fit
G. Consensus		L	L	L	L	L	M	M	M	M	M	L	M	U	H	M	H	
1	L															C		
2	M														P	P		
3	H														P	P		
4	M						S		P						P			
5	L						P								P			
6	M	P													P			
7	L									C								
8	L															C		
9	H												P			P		
10	M															C		
11	L														C			
12	M														C			
13	M														C			
14	H														C			

15	L															C		
16	M														P	P		
17	H														P	P		
18	H															P	P	
19	M						S									P	P	
20	H															P	P	
21	M															C		
22	M															P	P	
23	M															P	P	
24	M																C	
25	L															P	P	
26	L	P														P		
27	M															C		
28	M															C		
29	M															C		
30	M															C		

9 th Grade Math		Understand a variety of math concepts.				Apply a variety of math concepts.				Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry and measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry and measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems requiring multiple steps and operations.	Reason quantitatively.	Make inferences based on data presented in a variety of ways.	Interpret data from a variety of sources.	
G. Consensus		L	L	L	L	M	M	H	H	L	M	H	H	H	H	No Fit
1	L					C										
2	L					P						P				
3	M	C														
4	L									P	P					
5	M								C							
6	L					C										
7	M					C										
8	M					P		P				P				
9	M					P						P	P			
10	L					P						P				
11	L					P						P				
12	M										C					
13	M													C		
14	L					C										

15	L							C								
16	L									P	P					
17	M					P						P	P			
18	M							C								
19	M				P								P			
20	M				P								P		P	
21	L					C										
22	M										P				P	
23	M			P			P									
24	L										C					
25	L					P						P				
26	M	C														
27	M			P											P	
28	M					P	P						P	P		
29	M			P				P					P			P
30	M			C												
31	M					C										
32	L					C										
33	M													C		
34	L	P								P						
35	L			P		P										
36	M															C
37	L		C													
38	M										P	P				P
39	L															C
40	L					P										P

10 th Grade Math		Understand a variety of math concepts.				Apply a variety of math concepts.				Understand methods of estimation.	Apply methods of estimation.	Solve a variety of math problems.	Interpret data presented in a variety of ways.			
ITEM NUMBER	Item Cognitive Complexity	Understand number properties and operations.	Understand concepts and procedures of algebra.	Understand concepts of geometry and measurement.	Understand concepts in probability and statistics.	Apply number properties and operations.	Apply concepts and procedures of algebra.	Apply concepts of geometry and measurement.	Apply concepts in probability and statistics.	Understand concepts and procedures of standard rounding, order of magnitude, and number sense.	Apply concepts and procedures of standard rounding, order of magnitude, and number sense.	Solve math problems requiring multiple steps and operations.	Reason quantitatively.	Make inferences based on data presented in a variety of ways.	Interpret data from a variety of sources.	No Fit
G. Consensus		L	L	L	L	M	M	H	H	L	M	H	H	H	H	
1	L					C										
2	L										P			P		
3	L	P		P												
4	L								C							
5	L					P					P					
6	M	P										P				
7	M			P										P		
8	M					P					P	P				
9	H							P			P	P				
10	M			C												
11	L					C										
12	L	C														
13	M	P										P				

14	M	P											P			
15	L	P		P												
16	M												P		P	
17	L						C									
18	L														C	
19	L														C	
20	L					P						P	P		P	
21	L					P	P									
22	L	C														
23	M					P						P				
24	L								C							
25	L				C											
26	M					P						P				
27	L														C	
28	L														C	
29	L														C	
30	M														C	
31	M							P				P			P	
32	M			P											P	
33	M			P											P	
34	M					C										
35	M	C														
36	M					C										
37	L					C										
38	M		P												P	
39	M	C														
40	M										C					

Appendix C—Panelists’ Comments

“Thanks! Good luck!”

“It would be helpful to have information before we got here—especially knowing what we were going to be working with (math/reading). It would have also been useful if the benchmarks would have been discussed by the ITBS ‘person’.”

“If we could be in a larger space to be spread out (from other groups) it would help to control noise level.”

“Several people on our team felt definition of benchmarks would be helpful.”

“I would be happy to participate in another study.”

“Grid rows: alternate shade/clear. C, P, S: try some group modeling and discussion.”

“I appreciated the organization and up front work done by Buros and DE staff.”

“The process was very well set up!”

“Good session! No changes.”

“Great PD opportunity!! I'm ready to do science!”

“Elaine was a delightful host!”

“Very good learning experience!”

“This was a wonderful experience: 1) Makes me appreciate all that goes into the design of assessments, 2) Showed me just how much of ITBS is inferential.”

“Very well organized!”

“Explain more clearly the goals of each chunk of time spent on practice session. Be clear also re-when discussion is allowed (during independent and consensus work). DE and other leaders should not stand and talk close to people trying to read/work! Mark charts with item numbers on both left and right margins.”

“The alignment of benchmarks to cognitive complexity is less effective out of context of the tasks, especially with such global, generalized benchmarks.”

“I found it to be an extremely interesting process. It probably was one of the most valuable learning experiences that I've had with ITBS.”

“It would be more beneficial to do a section of a test and then discuss before moving on (as opposed to working whole test and then talking).”

“I feel that the process of assigning L, M, H ratings to the benchmarks is a pointless task. The level is completely different by the question and answer choices. I did not use the pre-assigned ratings at all when making decisions about specific items.”

“A sheet to make notes of [sic]--like the test booklet.”