

Kentucky Summative Assessments



2024–2025 Yearbook

» Pearson

Table of Contents

Appendix A. Participation Rates	4
Appendix B. Score Reports	7
Appendix C. Item Mean Summaries	14
Appendix D. Item-Total Correlation Summaries	16
Appendix E. Differential Item Functioning Summaries.....	18
Appendix F. Item Response Theory Parameter Summary	21
Appendix G. Scoring Tables	23
Appendix H. Score Frequency Distributions	92
Appendix I. Scale Score Descriptive Statistics	101
Appendix J. Performance Level Rates	114
Appendix K. Reliability	127
Appendix L. Scoring Metrics for KSA Constructed-Response Items.....	140
Appendix M. On-Demand Writing Score Distribution and Rater Agreement.....	157
Appendix N. Proficiency Classification Accuracy and Consistency	168
Appendix O. Principal Components Analysis of Dimensionality.....	169
Appendix P. Model Fit Indices for Confirmatory Factor Analysis	170

Glossary of Terms

Classification accuracy: the extent to which achievement classifications from test scores match classifications if test scores contained no error of measurement.

Classification consistency: the extent to which achievement classifications from test scores match classifications from test scores of a parallel form of the same test.

Constructed-response item: a test item that requires a form of written response by the examinee.

Differential item functioning (DIF): the difference in performance on an item between subgroups of students, after controlling for differences in group achievement or score level.

Item response theory (IRT): the measurement theory that prescribes relationships of item difficulty and examinee proficiency for indices of test performance.

Item-test correlation: the correlation between item score and total test score.

Kappa (statistic): the proportion of consistent performance level classifications beyond chance.

Multiple-choice item: a test item that requires selection of response from a group of options.

Performance level: a categorization of achievement from test performance.

p-value: the proportion of correct responses to an item (for multiple-choice items).

Rasch model: a measurement model that factors proficiency and item difficulty in determining probability of item success.

Raw score: the sum of points for a test or subdomain.

Reliability: the consistency of results obtained from a measurement.

Scaled score: a score derived from a transformation of a raw score.

Standard error of measurement (SEM): a statistic in classical test theory that expresses the interval of an examinee's true score.

Standard setting: the process of setting cut points that delineate levels of achievement.

True score: a student's expected score resulting from multiple replications of measurement.

Appendix A. Participation Rates

Reading

Category	Group	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
All	Students Tested	49,356	46,410	47,086	47,092	43,676	46,652	48,630
Gender	Female	48.8%	49.1%	48.7%	48.5%	48.2%	48.5%	48.8%
	Male	51.2%	50.9%	51.3%	51.5%	51.8%	51.5%	51.2%
Ethnicity	Hispanic	10.1%	10.1%	10.1%	9.9%	9.9%	10.2%	10.1%
	Asian	2.1%	2.2%	2.2%	2.2%	2.4%	2.1%	1.9%
	Native Hawaiian/Pacific Islander	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
	Black/African American	10.2%	10.6%	10.5%	10.6%	10.2%	10.9%	11.2%
	American Indian	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%
	White	71.2%	71.0%	71.2%	71.4%	71.9%	71.4%	71.6%
	Two or More Races	6.0%	5.8%	5.6%	5.5%	5.4%	5.1%	4.9%
Migrant	Non-Migrant	99.4%	99.5%	99.5%	99.4%	99.5%	99.5%	99.5%
	Migrant	0.6%	0.5%	0.5%	0.6%	0.5%	0.5%	0.5%
LEP	Non-LEP	90.4%	91.0%	93.0%	94.4%	94.0%	93.9%	94.4%
	LEP	9.6%	9.0%	7.0%	5.6%	6.0%	6.1%	5.6%
Economic Disadvantage	Economically Disadvantaged	64.2%	62.5%	62.1%	61.1%	59.7%	59.3%	56.9%
	Not Economically Disadvantaged	35.8%	37.5%	37.9%	38.9%	40.3%	40.7%	43.1%
IEP	Non-IEP	81.7%	82.1%	83.6%	85.4%	86.9%	87.7%	89.2%
	IEP	18.3%	17.9%	16.4%	14.6%	13.1%	12.3%	10.8%

Mathematics

Category	Group	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
All	Students Tested	49,350	46,412	47,090	47,061	43,663	46,633	48,531
Gender	Female	48.8%	49.1%	48.7%	48.5%	48.2%	48.5%	48.8%
	Male	51.2%	50.9%	51.3%	51.5%	51.8%	51.5%	51.2%
Ethnicity	Hispanic	10.1%	10.1%	10.1%	9.9%	9.9%	10.2%	10.1%
	Asian	2.2%	2.2%	2.2%	2.2%	2.4%	2.1%	1.9%
	Native Hawaiian/Pacific Islander	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
	Black/African American	10.2%	10.6%	10.5%	10.6%	10.2%	10.9%	11.1%
	American Indian	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.2%
	White	71.2%	71.0%	71.1%	71.4%	71.9%	71.4%	71.7%
	Two or More Races	6.0%	5.8%	5.6%	5.5%	5.4%	5.1%	4.9%
Migrant	Non-Migrant	99.4%	99.5%	99.5%	99.4%	99.5%	99.5%	99.5%
	Migrant	0.6%	0.5%	0.5%	0.6%	0.5%	0.5%	0.5%
LEP	Non-LEP	90.3%	91.0%	93.0%	94.4%	94.0%	93.9%	94.4%
	LEP	9.7%	9.0%	7.0%	5.6%	6.0%	6.1%	5.6%
Economic Disadvantage	Economically Disadvantaged	64.2%	62.5%	62.1%	61.1%	59.7%	59.3%	56.8%
	Not Economically Disadvantaged	35.8%	37.5%	37.9%	38.9%	40.3%	40.7%	43.2%
IEP	Non-IEP	81.7%	82.1%	83.6%	85.4%	86.9%	87.8%	89.3%
	IEP	18.3%	17.9%	16.4%	14.6%	13.1%	12.2%	10.7%

Science

Category	Group	Grade 4	Grade 7	Grade 11
All	Students Tested	46,403	43,614	46,322
Gender	Female	49.1%	48.3%	49.6%
	Male	50.9%	51.7%	50.4%
Ethnicity	Hispanic	10.1%	9.9%	9.9%
	Asian	2.2%	2.4%	2.0%
	Native Hawaiian/Pacific Islander	0.2%	0.2%	0.2%
	Black/African American	10.6%	10.2%	10.8%
	American Indian	0.1%	0.1%	0.1%
	White	71.0%	71.9%	72.6%
	Two or More Races	5.8%	5.4%	4.5%
Migrant	Non-Migrant	99.5%	99.5%	99.6%
	Migrant	0.5%	0.5%	0.4%
LEP	Non-LEP	91.0%	94.0%	95.3%
	LEP	9.0%	6.0%	4.7%
Economic Disadvantage	Economically Disadvantaged	62.5%	59.6%	54.1%
	Not Economically Disadvantaged	37.5%	40.4%	45.9%
IEP	Non-IEP	82.1%	86.9%	90.1%
	IEP	17.9%	13.1%	9.9%

Social Studies

Category	Group	Grade 5	Grade 8	Grade 11
All	Students Tested	47,034	46,582	46,231
Gender	Female	48.7%	48.5%	49.5%
	Male	51.3%	51.5%	50.5%
Ethnicity	Hispanic	10.1%	10.2%	9.8%
	Asian	2.2%	2.1%	2.0%
	Native Hawaiian/Pacific Islander	0.2%	0.2%	0.2%
	Black/African American	10.5%	10.9%	10.8%
	American Indian	0.2%	0.1%	0.1%
	White	71.2%	71.4%	72.6%
	Two or More Races	5.6%	5.1%	4.5%
Migrant	Non-Migrant	99.5%	99.5%	99.6%
	Migrant	0.5%	0.5%	0.4%
LEP	Non-LEP	93.0%	93.9%	95.3%
	LEP	7.0%	6.1%	4.7%
Economic Disadvantage	Economically Disadvantaged	62.1%	59.2%	54.1%
	Not Economically Disadvantaged	37.9%	40.8%	45.9%
IEP	Non-IEP	83.6%	87.8%	90.2%
	IEP	16.4%	12.2%	9.8%

Editing and Mechanics


Category	Group	Grade 5	Grade 8	Grade 11
All	Students Tested	46,435	46,007	45,673
Gender	Female	48.7%	48.5%	49.6%
	Male	51.3%	51.5%	50.4%
Ethnicity	Hispanic	10.2%	10.3%	9.9%
	Asian	2.2%	2.1%	2.0%
	Native Hawaiian/Pacific Islander	0.2%	0.2%	0.2%
	Black/African American	10.7%	11.0%	10.9%
	American Indian	0.2%	0.1%	0.1%
	White	70.9%	71.1%	72.4%
	Two or More Races	5.7%	5.2%	4.5%
Migrant	Non-Migrant	99.5%	99.5%	99.6%
	Migrant	0.5%	0.5%	0.4%
LEP	Non-LEP	93.0%	93.8%	95.3%
	LEP	7.0%	6.2%	4.7%
Economic Disadvantage	Economically Disadvantaged	62.0%	59.1%	54.0%
	Not Economically Disadvantaged	38.0%	40.9%	46.0%
IEP	Non-IEP	83.7%	87.8%	90.2%
	IEP	16.3%	12.2%	9.8%

On-Demand Writing

Category	Group	Grade 5	Grade 8	Grade 11
All	Students Tested	46,409	45,935	45,401
Gender	Female	48.7%	48.5%	49.7%
	Male	51.3%	51.5%	50.3%
Ethnicity	Hispanic	10.1%	10.3%	9.9%
	Asian	2.2%	2.1%	2.0%
	Native Hawaiian/Pacific Islander	0.2%	0.2%	0.2%
	Black/African American	10.7%	11.0%	10.8%
	American Indian	0.2%	0.1%	0.1%
	White	70.9%	71.2%	72.5%
	Two or More Races	5.7%	5.1%	4.5%
Migrant	Non-Migrant	99.5%	99.5%	99.6%
	Migrant	0.5%	0.5%	0.4%
LEP	Non-LEP	93.0%	93.9%	95.3%
	LEP	7.0%	6.1%	4.7%
Economic Disadvantage	Economically Disadvantaged	62.0%	59.1%	54.0%
	Not Economically Disadvantaged	38.0%	40.9%	46.0%
IEP	Non-IEP	83.7%	87.9%	90.2%
	IEP	16.3%	12.1%	9.8%

Appendix B. Score Reports

Individual Student Report (ISR)




FIRSTNAME05 J. LASTNAME05

These are your student's results from the
Kentucky Summative Assessments


Spring 2025
Grade 4

State ID: 316000005
Sample School Name
Sample District Name

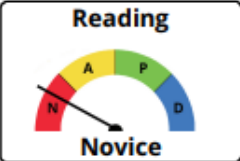


To access a full description of your child's Grade 4 Performance Levels please scan the QR Code or go to <https://bit.ly/PLDGrade4>.

Kentucky Summative Assessments Student Scores




Reading



Novice

Performance Level




Novice

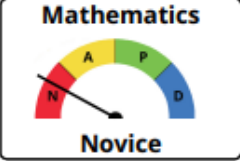
470

Score Range 400-502

A student performing at the **Novice** performance level for grade 4 Reading rarely reads closely, using details and examples from the text as well as explicit and implicit evidence, to support an explanation of what the text says and to analyze how the theme or central ideas are reflected in the text.




Mathematics



Novice

Performance Level




Novice

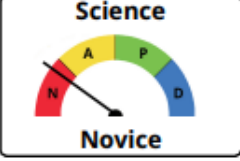
470

Score Range 400-506

A student performing at the **Novice** performance level for grade 4 Mathematics displays little understanding of how to make sense of quantities and their relationships in problem situations. The student rarely demonstrates the ability to flexibly choose among methods and strategies to solve contextual and mathematical problems, understand and explain their approaches and produce accurate answers efficiently.




Science



Novice

Performance Level



Novice


770


Score Range 700-782


A student performing at the **Novice** performance level for grade 4 Science has a minimal understanding of the three dimensions of the science and engineering concepts and practices incorporated in the Kentucky Academic Standards for Science up to grade 4.


Science scores reported for 2025 reflect student performance on revised standards, a new assessment design, and an updated scale score range of 700-900.

PERFORMANCE LEVEL LEGEND

 Novice (N)

 Apprentice (A)

 Proficient (P)

 Distinguished (D)

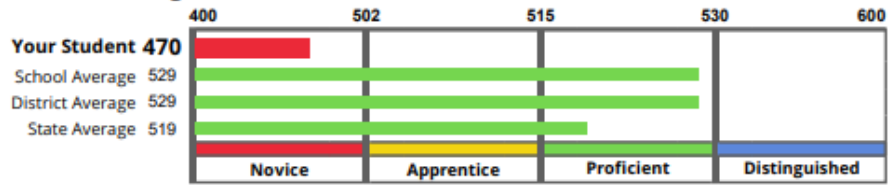
Page 1 of 2

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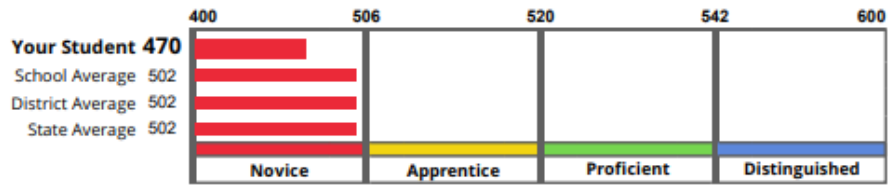
Kentucky Summative Assessments Student Scores (continued)

FIRSTNAME05 J. LASTNAME05

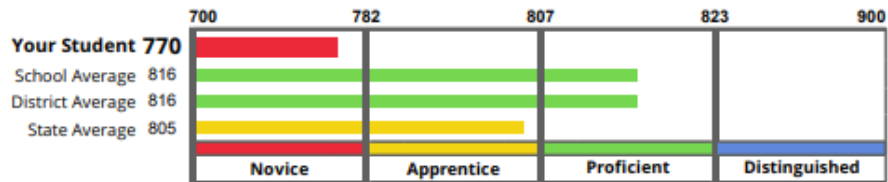
Reading: FIRSTNAME05'S OVERALL RESULTS - Novice



Mathematics: FIRSTNAME05'S OVERALL RESULTS - Novice



Science: FIRSTNAME05'S OVERALL RESULTS - Novice



Science scores reported for 2025 reflect student performance on revised standards, a new assessment design, and an updated scale score range of 700-900.

How will my student's school use the test results?

This report provides specific information about your student's performance on the Kentucky Summative Assessments (KSA). It also includes information for teachers and parents/guardians about how to support student learning. The KSA test is only one indication of how well students do in each subject tested; therefore, it is also important to consider how well students are doing on class work, special projects and assessments.

For further information, visit the Kentucky Department of Education online at <https://reportcard.kyschools.us>.

School Summary Report



TESTED STUDENTS SCHOOL SUMMARY

Kentucky Summative Assessments

School Name
District Name

Spring 2025
Grade 6
Mathematics

Grade 6 Mathematics

Percent of Students by Performance Level*

Number of Students tested	Novice	Apprentice	Proficient	Distinguished	Graph Display of Percent of Students by Performance Level
	Percent of Students by Performance Level				
State 41,223	56%	16%	9%	19%	
District 178	41%	14%	7%	38%	
School 32	42%	14%	6%	38%	
					0 25 50 75 100

Average Scores by Reporting Category

Each content area has been further divided into reporting categories to provide more detail about your school performance. The specific reporting categories have been analyzed for statistical significance to create a status by category. The school's formative assessment system should support how your students are performing on these content areas.

Overall Score in Mathematics (Average score for all students tested)		
State	###	
District	###	Compared to the STATE, this district's score is about the same. =
School	###	Compared to the STATE, this school's score is higher. ↑
		Compared to the DISTRICT, this school's score is lower. ↓

Compared to school's Overall Mathematics Score, this school's...		
School	###	Ratios and Proportional Relationships score is about the same. =
School	###	Number System score is higher. ↑
School	###	Expressions and Equations score is lower. ↓
School	###	Geometry score is about the same. =
School	###	Statistics and Probability score is about the same. =

* Students participating in the Alternate Kentucky Summative Assessments are included in Performance Level.

District Summary Report



TESTED STUDENTS DISTRICT SUMMARY
 Kentucky Summative Assessments

Spring 2025
 Grade 3
 Reading

District Name

Grade 3 Reading

DISTRICT NAME			Total Reading	Performance Level*			
School Name	Code	Number Students Tested		Novice	Apprentice	Proficient	Distinguished
State		###,###	###	###	###	###	###
District		###,###	###	###	###	###	###
School Name 1	#####	###,###	###	###	###	###	###
School Name 2	#####	###,###	###	###	###	###	###
School Name 3	#####	###,###	###	###	###	###	###
School Name 4	#####	###,###	###	###	###	###	###
School Name 5	#####	###,###	###	###	###	###	###
School Name 6	#####	###,###	###	###	###	###	###
School Name 7	#####	###,###	###	###	###	###	###
School Name 8	#####	###,###	###	###	###	###	###
School Name 9	#####	###,###	###	###	###	###	###
School Name 10	#####	###,###	###	###	###	###	###
School Name 11	#####	###,###	###	###	###	###	###
School Name 12	#####	###,###	###	###	###	###	###
School Name 13	#####	###,###	###	###	###	###	###
School Name 14	#####	###,###	###	###	###	###	###
School Name 15	#####	###,###	###	###	###	###	###
School Name 16	#####	###,###	###	###	###	###	###

*Students participating in the Alternate Kentucky Summative Assessments are included in Performance Level.

State Summary Report



TESTED STUDENTS STATE SUMMARY
 Kentucky Summative Assessments

Spring 2025
 Grade 3
 Reading

Commonwealth of Kentucky

Grade 3 Reading

District Name	Code	Number Students Tested	Scale Score	Performance Level*			
				Novice	Apprentice	Proficient	Distinguished
				Percent of Students			
State		###,###	###	###	###	###	###
District Name 1	#####	###,###	###	###	###	###	###
District Name 2	#####	###,###	###	###	###	###	###
District Name 3	#####	###,###	###	###	###	###	###
District Name 4	#####	###,###	###	###	###	###	###
District Name 5	#####	###,###	###	###	###	###	###
District Name 6	#####	###,###	###	###	###	###	###
District Name 7	#####	###,###	###	###	###	###	###
District Name 8	#####	###,###	###	###	###	###	###
District Name 9	#####	###,###	###	###	###	###	###
District Name 10	#####	###,###	###	###	###	###	###
District Name 11	#####	###,###	###	###	###	###	###
District Name 12	#####	###,###	###	###	###	###	###
District Name 13	#####	###,###	###	###	###	###	###
District Name 14	#####	###,###	###	###	###	###	###
District Name 15	#####	###,###	###	###	###	###	###
District Name 16	#####	###,###	###	###	###	###	###
District Name 17	#####	###,###	###	###	###	###	###
District Name 18	#####	###,###	###	###	###	###	###

*Students participating in the Alternate Kentucky Summative Assessments are included in Performance Level.

School Listing Report



TESTED STUDENTS SCHOOL LISTING
Kentucky Summative Assessments

Spring 2025
 Grade <3 or 6 or 10>

School Name
 District Name

NOVICE	APPRENTICE	PROFICIENT	DISTINGUISHED
--------	------------	------------	---------------

Student Name	Student ID	Alternate KSA ¹	Accommodated ²	Reading		Mathematics	
				Performance Level ³	Score	Performance Level ³	Score
ALASTNAME, FIRSTNAME I.	9999999999			N	###	N	###
BLASTNAME, FIRSTNAME I.	9999999999	Y	Y	D	###	P	###
CLASTNAME, FIRSTNAME I.	9999999999			N	###	N	###
DLASTNAME, FIRSTNAME I.	9999999999			D	###	D	###
ELASTNAME, FIRSTNAME I.	9999999999			P	###	A	###
FLASTNAME, FIRSTNAME I.	9999999999			N	###	A	###
GLASTNAME, FIRSTNAME I.	9999999999			P	###	A	###
HLASTNAME, FIRSTNAME I.	9999999999		Y	P	###	E	
ILASTNAME, FIRSTNAME I.	9999999999			D	###	P	###
JLASTNAME, FIRSTNAME I.	9999999999			D	###	P	###
KLASTNAME, FIRSTNAME I.	9999999999			P	###	E	
LLASTNAME, FIRSTNAME I.	9999999999			D	###	P	###
MLASTNAME, FIRSTNAME I.	9999999999			E		A	###
NLASTNAME, FIRSTNAME I.	9999999999			P	###	P	###
OLASTNAME, FIRSTNAME I.	9999999999	Y	Y	P	###	N	###
PLASTNAME, FIRSTNAME I.	9999999999			A	###	D	###
QLASTNAME, FIRSTNAME I.	9999999999			P	###	N	###
RLASTNAME, FIRSTNAME I.	9999999999			N	###	N	###
SLASTNAME, FIRSTNAME I.	9999999999			N	###	A	###
TLASTNAME, FIRSTNAME I.	9999999999			P	###	P	###

1 Y = Participates in Alternate Kentucky Summative Assessments
 2 Y = Participates in Kentucky Summative Assessments with accommodations
 3 The performance level designations are D = Distinguished, P = Proficient, A = Apprentice, N = Novice, E = Exempted; "—" = Student did not test

School Name (456)

Page 1 of 2

District Name (123)

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TESTED STUDENTS SCHOOL LISTING

Kentucky Summative Assessments

Spring 2025
Grade <3 or 6 or 10>

School Name
District Name

NOVICE	APPRENTICE	PROFICIENT	DISTINGUISHED
---------------	-------------------	-------------------	----------------------

Student Name	Student ID	Alternate KSA 1	Reading				Mathematics				
			Accommodated ²	Performance Level ³	Score	Score	Accommodated ²	Performance Level ³	Score	Score	
ZALASTNAME, FIRSTNAME I.	999999999			N	###		N	###			
ZBLASTNAME, FIRSTNAME I.	999999999	Y	Y	D	###	Y	P	###			
ZCLASTNAME, FIRSTNAME I.	999999999			N	###		N	###			
ZDLASTNAME, FIRSTNAME I.	999999999			D	###		D	###			
ZELASTNAME, FIRSTNAME I.	999999999			P	###		D	###			
ZFLASTNAME, FIRSTNAME I.	999999999			N	###		A	###			
ZGLASTNAME, FIRSTNAME I.	999999999	Y	Y	P	###	Y	A	###			
ZMLASTNAME, FIRSTNAME I.	999999999			P	###		E				
ZNLASTNAME, FIRSTNAME I.	999999999			D	###		P	###			
ZOLASTNAME, FIRSTNAME I.	999999999			D	###		P	###			
ZPLASTNAME, FIRSTNAME I.	999999999			P	###		E				
ZQLASTNAME, FIRSTNAME I.	999999999			D	###		A	###			
ZRLASTNAME, FIRSTNAME I.	999999999			E			D	###			
ZSLASTNAME, FIRSTNAME I.	999999999			P	###		A	###			
ZTLASTNAME, FIRSTNAME I.	999999999			P	###		P	###			

Number of Students Assessed: ###	Number of Students with One or More Test Exemptions: 6
Number of Students Alternate Assessed: ###	Total Number of Students: ###

1 Y = Participates in Alternate Kentucky Summative Assessments
 2 Y = Participates in Kentucky Summative Assessments with accommodations
 3 The performance level designations are D = Distinguished, P = Proficient, A = Apprentice, N = Novice, **E = Exempted**; "-" = Student did not test

Appendix C. Item Mean Summaries

Single-Point Items¹

Subject	Grade	$p < 0.30$	$0.30 = < p < 0.55$	$0.55 = < p < 0.75$	$0.75 = < p < 0.95$	$p \geq 0.95$	Mean of p	N
Reading	3	6	38	25	2	-	0.51	71
	4	4	31	33	6	-	0.56	74
	5	2	25	22	17	-	0.61	66
	6	2	19	38	13	-	0.62	72
	7	2	32	26	2	-	0.54	62
	8	3	33	33	1	-	0.52	70
	10	7	42	27	1	-	0.49	77
Mathematics	3	-	28	20	13	-	0.57	61
	4	1	21	24	8	-	0.60	54
	5	-	16	26	7	-	0.61	49
	6	6	31	16	-	-	0.48	53
	7	14	37	6	-	-	0.41	57
	8	5	46	8	1	-	0.44	60
	10	9	45	8	1	-	0.42	63
Science	4	6	38	36	7	-	0.54	87
	7	20	58	32	4	-	0.46	114
	11	24	52	28	3	-	0.44	107
Social Studies	5	3	38	22	9	-	0.55	72
	8	5	37	32	2	-	0.51	76
	11	4	27	39	2	-	0.56	72
Editing and Mechanics	5	5	15	24	20	-	0.62	64
	8	4	26	18	27	-	0.62	75
	11	2	17	28	18	-	0.61	65

¹ Single-point items include multiple choice, fill in the blank, short answer, and technical enhanced items.

Multi-Points Items²

Subject	Grade	2-Point Items				4-Point Items			
		<i>N</i>	<i>Mean</i>	<i>Min.</i>	<i>Max.</i>	<i>N</i>	<i>Mean</i>	<i>Min.</i>	<i>Max.</i>
Reading	3	37	1.02	0.60	1.62	-	-	-	-
	4	30	1.17	0.61	1.62	7	1.38	1.15	1.66
	5	31	1.20	0.60	1.75	6	1.93	1.81	2.15
	6	27	1.17	0.25	1.62	6	1.63	1.29	1.83
	7	30	1.08	0.69	1.49	5	1.28	1.02	1.53
	8	29	1.09	0.70	1.54	5	1.25	0.95	1.43
	10	30	0.90	0.34	1.27	6	1.33	1.18	1.58
Mathematics	3	14	1.12	0.75	1.61	-	-	-	-
	4	6	1.02	0.55	1.38	3	1.50	1.00	1.77
	5	10	1.13	0.55	1.69	1	1.51	1.51	1.51
	6	9	1.12	0.53	1.68	1	1.51	1.51	1.51
	7	8	0.71	0.28	1.06	2	1.03	0.78	1.28
	8	10	0.79	0.38	1.27	3	0.88	0.79	1.01
	10	8	0.64	0.23	1.12	1	0.99	0.99	0.99
Science	4	48	1.06	0.33	1.62	3	0.90	0.77	0.99
	7	57	0.91	0.32	1.55	3	0.77	0.44	1.04
	11	59	0.82	0.17	1.50	3	0.95	0.86	1.11
Social Studies	5	6	1.28	1.03	1.43	2	1.02	0.95	1.09
	8	9	1.16	0.91	1.46	2	1.63	1.47	1.80
	11	9	1.09	0.65	1.67	1	1.61	1.61	1.61
Editing and Mechanics	5	39	1.16	0.37	1.84	-	-	-	-
	8	43	1.23	0.57	1.79	-	-	-	-
	11	38	1.03	0.24	1.64	-	-	-	-

² Multi-points items include multi-select, short answer, multi-part, and technical enhanced items for 2-point items, and extended response 4-point items.

Appendix D. Item-Total Correlation Summaries

Single-Point Items³

Subject	Grade	$r < 0.20$	$0.20 \leq r < 0.40$	$0.40 \leq r < 0.60$	$0.60 \leq r < 0.80$	$r \geq 0.80$	Median Pt. Bis	N
Reading	3	13	27	31	-	-	0.37	71
	4	6	30	38	-	-	0.40	74
	5	8	29	29	-	-	0.39	66
	6	3	32	37	-	-	0.40	72
	7	5	38	19	-	-	0.34	62
	8	10	40	20	-	-	0.35	70
	10	10	33	34	-	-	0.38	77
Mathematics	3	-	19	41	1	-	0.43	61
	4	-	13	41	-	-	0.45	54
	5	-	12	35	2	-	0.46	49
	6	-	21	32	-	-	0.44	53
	7	4	30	23	-	-	0.38	57
	8	-	31	28	1	-	0.39	60
	10	5	28	30	-	-	0.39	63
Science	4	9	32	46	-	-	0.41	87
	7	13	56	44	1	-	0.37	114
	11	16	50	40	1	-	0.37	107
Social Studies	5	5	34	33	-	-	0.39	72
	8	5	31	39	1	-	0.40	76
	11	5	25	42	-	-	0.43	72
Editing and Mechanics	5	4	37	23	-	-	0.35	64
	8	7	42	26	-	-	0.36	75
	11	7	16	42	-	-	0.42	65

³ Single-point items include multiple choice, fill in the blank, short answer, and technical enhanced items.

Appendix D. Item-Total Correlation Summaries

Multi-Points Items⁴

Subject	Grade	2-Point Items				4-Point Items			
		<i>N</i>	<i>Median r</i>	<i>Min. r</i>	<i>Max. r</i>	<i>N</i>	<i>Median r</i>	<i>Min. r</i>	<i>Max. r</i>
Reading	3	37	0.52	0.06	0.64	-	-	-	-
	4	30	0.45	0.24	0.65	7	0.60	0.53	0.70
	5	31	0.46	0.07	0.63	6	0.62	0.55	0.72
	6	27	0.49	0.20	0.65	6	0.65	0.62	0.68
	7	30	0.51	0.19	0.63	5	0.64	0.60	0.66
	8	29	0.48	0.20	0.64	5	0.62	0.60	0.68
	10	30	0.44	0.15	0.69	6	0.63	0.62	0.73
Mathematics	3	14	0.54	0.37	0.67	-	-	-	-
	4	6	0.51	0.45	0.61	3	0.75	0.70	0.79
	5	10	0.57	0.36	0.68	1	0.75	0.75	0.75
	6	9	0.47	0.37	0.68	1	0.68	0.68	0.68
	7	8	0.49	0.27	0.69	2	0.70	0.69	0.71
	8	10	0.53	0.30	0.69	3	0.74	0.69	0.78
	10	8	0.50	0.17	0.66	1	0.71	0.71	0.71
Science	4	48	0.49	0.24	0.62	3	0.57	0.57	0.67
	7	57	0.49	0.06	0.63	3	0.58	0.57	0.61
	11	59	0.50	0.17	0.66	3	0.69	0.67	0.69
Social Studies	5	6	0.52	0.46	0.62	2	0.58	0.55	0.60
	8	9	0.46	0.39	0.65	2	0.72	0.70	0.74
	11	9	0.52	0.14	0.70	1	0.70	0.70	0.70
Editing and Mechanics	5	39	0.45	0.12	0.66	-	-	-	-
	8	43	0.45	0.05	0.64	-	-	-	-
	11	38	0.50	0.13	0.68	-	-	-	-

⁴ Multi-points items include multi-select, short answer, multi-part, and technical enhanced items for 2-point items and extended response 4-point items.

Appendix E. Differential Item Functioning Summaries

Reading

Grade	Subgroups	DIF Categories					
		Negligible DIF		Moderate DIF		Substantial DIF	
		Focal	Reference	Focal	Reference	Focal	Reference
3	Male-Female	45	59	2	1	1	-
	White-Black	37	70	-	1	-	-
	White-Hispanic	54	53	-	1	-	-
4	Male-Female	42	59	3	4	1	2
	White-Black	34	72	-	3	-	2
	White-Hispanic	42	65	-	4	-	-
5	Male-Female	35	54	10	3	1	-
	White-Black	28	72	-	3	-	-
	White-Hispanic	40	61	1	1	-	-
6	Male-Female	40	56	6	2	1	-
	White-Black	39	63	-	3	-	-
	White-Hispanic	38	65	-	2	-	-
7	Male-Female	45	40	7	1	4	-
	White-Black	44	52	-	1	-	-
	White-Hispanic	44	50	-	3	-	-
8	Male-Female	41	59	-	1	2	1
	White-Black	35	65	-	4	-	-
	White-Hispanic	33	71	-	-	-	-
10	Male-Female	36	58	9	4	4	2
	White-Black	35	73	-	4	-	1
	White-Hispanic	39	72	-	2	-	-

Note. "Focal" indicates DIF in favor of Female, Black, or Hispanic students. "Reference" indicates DIF in favor of Male or White students.

Appendix E. Differential Item Functioning Summaries

Mathematics

Grade	Subgroups	DIF Categories					
		Negligible DIF		Moderate DIF		Substantial DIF	
		Focal	Reference	Focal	Reference	Focal	Reference
3	Male-Female	43	30	1	-	-	1
	White-Black	33	42	-	-	-	-
	White-Hispanic	30	45	-	-	-	-
4	Male-Female	31	27	-	3	-	2
	White-Black	22	40	-	1	-	-
	White-Hispanic	23	39	-	1	-	-
5	Male-Female	27	30	-	3	-	-
	White-Black	25	35	-	-	-	-
	White-Hispanic	18	42	-	-	-	-
6	Male-Female	35	28	-	-	-	-
	White-Black	31	32	-	-	-	-
	White-Hispanic	26	37	-	-	-	-
7	Male-Female	30	36	-	1	-	-
	White-Black	37	30	-	-	-	-
	White-Hispanic	31	36	-	-	-	-
8	Male-Female	36	35	1	1	-	-
	White-Black	44	29	-	-	-	-
	White-Hispanic	36	37	-	-	-	-
10	Male-Female	29	39	1	2	-	1
	White-Black	38	32	-	1	-	1
	White-Hispanic	31	39	-	2	-	-

Note. "Focal" indicates DIF in favor of Female, Black, or Hispanic students. "Reference" indicates DIF in favor of Male or White students.

Science

Grade	Subgroups	DIF Categories					
		Negligible DIF		Moderate DIF		Substantial DIF	
		Focal	Reference	Focal	Reference	Focal	Reference
4	Male-Female	57	76	4	1	-	-
	White-Black	56	81	-	1	-	-
	White-Hispanic	46	89	-	3	-	-
7	Male-Female	68	87	10	4	4	1
	White-Black	75	95	-	4	-	-
	White-Hispanic	65	106	-	3	-	-
11	Male-Female	77	80	4	2	-	6
	White-Black	73	91	1	4	-	-
	White-Hispanic	75	89	-	5	-	-

Note. "Focal" indicates DIF in favor of Female, Black, or Hispanic students. "Reference" indicates DIF in favor of Male or White students.

Appendix E. Differential Item Functioning Summaries

Social Studies

Grade	Subgroups	DIF Categories					
		Negligible DIF		Moderate DIF		Substantial DIF	
		Focal	Reference	Focal	Reference	Focal	Reference
5	Male-Female	28	46	3	3	-	-
	White-Black	31	48	-	1	-	-
	White-Hispanic	37	43	-	-	-	-
8	Male-Female	25	55	1	3	3	-
	White-Black	37	49	-	1	-	-
	White-Hispanic	36	51	-	-	-	-
11	Male-Female	29	46	1	2	3	1
	White-Black	38	44	-	-	-	-
	White-Hispanic	32	49	-	1	-	-

Note. "Focal" indicates DIF in favor of Female, Black, or Hispanic students. "Reference" indicates DIF in favor of Male or White students.

Editing and Mechanics

Grade	Subgroups	DIF Categories					
		Negligible DIF		Moderate DIF		Substantial DIF	
		Focal	Reference	Focal	Reference	Focal	Reference
5	Male-Female	56	42	3	2	-	-
	White-Black	40	61	-	2	-	-
	White-Hispanic	47	53	-	2	-	1
8	Male-Female	55	52	3	5	2	1
	White-Black	29	78	-	7	-	4
	White-Hispanic	35	73	1	6	-	3
11	Male-Female	64	26	7	4	1	1
	White-Black	41	56	1	5	-	-
	White-Hispanic	51	48	-	3	1	-

Note. "Focal" indicates DIF in favor of Female, Black, or Hispanic students. "Reference" indicates DIF in favor of Male or White students.

Appendix F. Item Response Theory Parameter Summary

Reading

Grade	#Items	Item Difficulty					Infit				Outfit			
		Min.	P25	Median	P75	Max.	<0.5	0.5<=Infit<1.5	1.5<=Infit<2.0	>2.0	<0.5	0.5<=Outfit<1.5	1.5<=Outfit<2.0	>2.0
3	107	-1.3830	-0.3974	0.1147	0.4950	1.5142	-	107	-	-	-	107	-	-
4	111	-1.9118	-0.5228	0.0575	0.7588	2.0994	-	111	-	-	-	107	4	-
5	103	-2.3601	-0.5212	0.2847	0.9228	2.1913	-	103	-	-	-	101	2	-
6	103	-1.6805	-0.4743	0.0285	0.5677	2.3172	-	103	-	-	-	102	1	-
7	97	-1.4506	-0.4896	-0.0066	0.4390	1.3472	-	97	-	-	-	97	-	-
8	103	-1.5358	-0.5263	0.0347	0.4741	2.3241	-	103	-	-	-	102	1	-
10	112	-1.1387	-0.1924	0.2729	0.7075	2.0273	-	112	-	-	-	111	1	-

Mathematics

Grade	#Items	Item Difficulty					Infit				Outfit			
		Min.	P25	Median	P75	Max.	<0.5	0.5<=Infit<1.5	1.5<=Infit<2.0	>2.0	<0.5	0.5<=Outfit<1.5	1.5<=Outfit<2.0	>2.0
3	75	-2.2483	-0.5302	0.1031	0.9259	1.4544	-	75	-	-	-	74	1	-
4	63	-2.5099	-0.4765	0.1533	0.7877	1.7643	-	63	-	-	-	62	1	-
5	60	-1.9302	-0.8356	-0.3245	0.2162	1.1641	-	60	-	-	-	59	-	1
6	63	-1.9935	-0.6647	-0.2566	0.1855	1.3116	-	63	-	-	-	63	-	-
7	67	-1.0647	-0.3737	0.1664	0.7523	1.8767	-	67	-	-	-	67	-	-
8	73	-1.8235	-0.4043	-0.0170	0.3720	1.7155	-	73	-	-	-	73	-	-
10	72	-1.8870	-0.5227	-0.0216	0.4304	1.8725	-	72	-	-	1	71	-	-

Science

Grade	#Items	Item Difficulty					Infit				Outfit			
		Min.	P25	Median	P75	Max.	<0.5	0.5<=Infit<1.5	1.5<=Infit<2.0	>2.0	<0.5	0.5<=Outfit<1.5	1.5<=Outfit<2.0	>2.0
4	138	-3.0564	-0.5508	-0.0837	0.4897	2.3718	-	138	-	-	-	135	3	-
7	174	-2.4052	-0.6256	-0.1002	0.5715	2.8222	-	173	1	-	-	169	5	-
11	169	-2.1313	-0.7112	-0.2070	0.5853	2.2934	-	169	-	-	-	165	3	1

Appendix F. Item Response Theory Parameter Summary

Social Studies

Grade	#Items	Item Difficulty					Infit				Outfit			
		Min.	P25	Median	P75	Max.	<0.5	0.5<=Infit<1.5	1.5<=Infit<2.0	>2.0	<0.5	0.5<=Outfit<1.5	1.5<=Outfit<2.0	>2.0
5	80	-2.5026	-0.5957	-0.0274	0.3385	2.0578	-	80	-	-	-	79	1	-
8	85	-1.9091	-0.4544	-0.2286	0.2608	1.4992	-	85	-	-	-	84	1	-
11	80	-2.0379	-0.7343	-0.3499	0.0255	1.7949	-	80	-	-	-	78	2	-

Editing and Mechanics

Grade	#Items	Item Difficulty					Infit				Outfit			
		Min.	P25	Median	P75	Max.	<0.5	0.5<=Infit<1.5	1.5<=Infit<2.0	>2.0	<0.5	0.5<=Outfit<1.5	1.5<=Outfit<2.0	>2.0
5	103	-2.2525	-0.8268	-0.0348	0.8568	2.4772	-	103	-	-	-	102	1	-
8	116	-2.8374	-1.0980	-0.4250	0.5370	2.2416	-	116	-	-	4	110	2	-
11	103	-1.6332	-0.7237	-0.0230	0.6232	2.5433	-	103	-	-	-	98	5	-

Appendix G. Scoring Tables

Grade 3 Reading, Forms 1 – 5

Form	Raw Score	Scale Score	Conditional SEM
01-05	0	400	34
01-05	1	440	17
01-05	2	452	12
01-05	3	460	10
01-05	4	465	9
01-05	5	470	8
01-05	6	473	8
01-05	7	477	7
01-05	8	480	7
01-05	9	483	7
01-05	10	485	6
01-05	11	488	6
01-05	12	490	6
01-05	13	492	6
01-05	14	494	6
01-05	15	496	6
01-05	16	498	6
01-05	17	500	6
01-05	18	502	6
01-05	19	504	6
01-05	20	506	6
01-05	21	508	6
01-05	22	509	6
01-05	23	511	6
01-05	24	513	6
01-05	25	515	6
01-05	26	517	6
01-05	27	519	6
01-05	28	521	6
01-05	29	523	6
01-05	30	525	6
01-05	31	528	6
01-05	32	530	6
01-05	33	533	7
01-05	34	535	7
01-05	35	539	7
01-05	36	542	8
01-05	37	546	8
01-05	38	551	9
01-05	39	556	10
01-05	40	564	12
01-05	41	577	17
01-05	42	600	34

Grade 3 Reading, Forms 6 – 10

Form	Raw Score	Scale Score	Conditional SEM
06-10	0	400	33
06-10	1	445	17
06-10	2	457	12
06-10	3	464	10
06-10	4	469	9
06-10	5	474	8
06-10	6	477	7
06-10	7	481	7
06-10	8	483	7
06-10	9	486	6
06-10	10	488	6
06-10	11	491	6
06-10	12	493	6
06-10	13	495	6
06-10	14	497	6
06-10	15	499	6
06-10	16	501	6
06-10	17	503	6
06-10	18	504	5
06-10	19	506	5
06-10	20	508	5
06-10	21	510	5
06-10	22	511	5
06-10	23	513	5
06-10	24	515	5
06-10	25	517	5
06-10	26	519	5
06-10	27	520	6
06-10	28	522	6
06-10	29	524	6
06-10	30	526	6
06-10	31	528	6
06-10	32	530	6
06-10	33	533	6
06-10	34	535	7
06-10	35	538	7
06-10	36	541	7
06-10	37	545	8
06-10	38	549	9
06-10	39	555	10
06-10	40	562	12
06-10	41	574	17
06-10	42	598	34

Grade 3 Reading, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	440	17
2	453	12
3	460	10
4	466	9
5	471	8
6	474	8
7	478	7
8	481	7
9	484	7
10	486	7
11	489	6
12	491	6
13	493	6
14	496	6
15	498	6
16	500	6
17	502	6
18	504	6
19	506	6
20	508	6
21	510	6
22	512	6
23	514	6
24	516	6
25	518	6
26	520	6
27	522	6
28	524	6
29	527	6
30	529	7
31	532	7
32	535	7
33	538	7
34	541	8
35	545	8
36	550	9
37	556	10
38	564	13
39	576	17
40	600	34

Grade 4 Reading, Forms 1 – 5

Form	Raw Score	Scale Score	Conditional SEM
01-05	0	400	34
01-05	1	444	17
01-05	2	456	12
01-05	3	464	10
01-05	4	469	9
01-05	5	474	8
01-05	6	478	8
01-05	7	481	7
01-05	8	484	7
01-05	9	487	7
01-05	10	489	6
01-05	11	491	6
01-05	12	494	6
01-05	13	496	6
01-05	14	498	6
01-05	15	500	6
01-05	16	501	6
01-05	17	503	5
01-05	18	505	5
01-05	19	507	5
01-05	20	509	5
01-05	21	510	5
01-05	22	512	5
01-05	23	514	5
01-05	24	515	5
01-05	25	517	5
01-05	26	519	5
01-05	27	521	5
01-05	28	522	5
01-05	29	524	5
01-05	30	526	6
01-05	31	528	6
01-05	32	530	6
01-05	33	532	6
01-05	34	534	6
01-05	35	536	6
01-05	36	539	7
01-05	37	542	7
01-05	38	545	7
01-05	39	548	8
01-05	40	552	9
01-05	41	558	10
01-05	42	565	12
01-05	43	577	17
01-05	44	600	33

Grade 4 Reading, Forms 6 – 10

Form	Raw Score	Scale Score	Conditional SEM
06-10	0	400	34
06-10	1	442	17
06-10	2	454	12
06-10	3	462	10
06-10	4	467	9
06-10	5	472	8
06-10	6	476	8
06-10	7	479	7
06-10	8	482	7
06-10	9	485	7
06-10	10	487	6
06-10	11	490	6
06-10	12	492	6
06-10	13	494	6
06-10	14	496	6
06-10	15	498	6
06-10	16	500	6
06-10	17	502	6
06-10	18	504	6
06-10	19	506	6
06-10	20	508	5
06-10	21	509	5
06-10	22	511	5
06-10	23	513	5
06-10	24	515	5
06-10	25	517	5
06-10	26	518	5
06-10	27	520	5
06-10	28	522	6
06-10	29	524	6
06-10	30	526	6
06-10	31	528	6
06-10	32	530	6
06-10	33	532	6
06-10	34	534	6
06-10	35	537	7
06-10	36	539	7
06-10	37	542	7
06-10	38	545	8
06-10	39	549	8
06-10	40	554	9
06-10	41	560	11
06-10	42	568	13
06-10	43	581	17
06-10	44	600	34

Grade 4 Reading, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	444	17
2	457	12
3	464	10
4	470	9
5	474	8
6	478	8
7	481	7
8	484	7
9	487	7
10	489	6
11	492	6
12	494	6
13	496	6
14	498	6
15	500	6
16	502	6
17	504	6
18	505	5
19	507	5
20	509	5
21	511	5
22	513	5
23	514	5
24	516	5
25	518	5
26	519	5
27	521	5
28	523	6
29	525	6
30	527	6
31	529	6
32	531	6
33	533	6
34	535	6
35	538	7
36	541	7
37	544	7
38	547	8
39	552	9
40	557	10
41	564	12
42	576	17
43	599	33

Grade 5 Reading, Forms 1 – 5

Form	Raw Score	Scale Score	Conditional SEM
01-05	0	400	34
01-05	1	441	17
01-05	2	453	13
01-05	3	461	10
01-05	4	467	9
01-05	5	472	9
01-05	6	476	8
01-05	7	479	8
01-05	8	483	7
01-05	9	486	7
01-05	10	488	7
01-05	11	491	7
01-05	12	494	6
01-05	13	496	6
01-05	14	498	6
01-05	15	500	6
01-05	16	503	6
01-05	17	505	6
01-05	18	507	6
01-05	19	509	6
01-05	20	511	6
01-05	21	513	6
01-05	22	515	6
01-05	23	517	6
01-05	24	519	6
01-05	25	521	6
01-05	26	523	6
01-05	27	525	6
01-05	28	527	6
01-05	29	529	6
01-05	30	531	6
01-05	31	534	6
01-05	32	536	7
01-05	33	539	7
01-05	34	542	7
01-05	35	545	7
01-05	36	548	8
01-05	37	552	8
01-05	38	557	9
01-05	39	562	10
01-05	40	570	12
01-05	41	583	17
01-05	42	600	34

Grade 5 Reading, Forms 6 – 10

Form	Raw Score	Scale Score	Conditional SEM
06-10	0	400	34
06-10	1	443	17
06-10	2	456	12
06-10	3	463	10
06-10	4	469	9
06-10	5	474	8
06-10	6	477	8
06-10	7	481	7
06-10	8	484	7
06-10	9	487	7
06-10	10	490	7
06-10	11	492	6
06-10	12	494	6
06-10	13	497	6
06-10	14	499	6
06-10	15	501	6
06-10	16	503	6
06-10	17	505	6
06-10	18	507	6
06-10	19	509	6
06-10	20	511	6
06-10	21	513	6
06-10	22	515	6
06-10	23	517	6
06-10	24	519	6
06-10	25	521	6
06-10	26	523	6
06-10	27	525	6
06-10	28	527	6
06-10	29	529	6
06-10	30	531	6
06-10	31	534	6
06-10	32	536	7
06-10	33	539	7
06-10	34	542	7
06-10	35	545	8
06-10	36	549	8
06-10	37	553	9
06-10	38	558	10
06-10	39	565	11
06-10	40	573	13
06-10	41	586	18
06-10	42	600	34

Grade 6 Reading, Forms 1 – 5

Form	Raw Score	Scale Score	Conditional SEM
01-05	0	400	34
01-05	1	444	17
01-05	2	457	12
01-05	3	464	10
01-05	4	470	9
01-05	5	474	8
01-05	6	478	8
01-05	7	481	7
01-05	8	484	7
01-05	9	487	7
01-05	10	490	6
01-05	11	492	6
01-05	12	495	6
01-05	13	497	6
01-05	14	499	6
01-05	15	501	6
01-05	16	503	6
01-05	17	505	6
01-05	18	507	6
01-05	19	509	6
01-05	20	511	6
01-05	21	513	6
01-05	22	515	6
01-05	23	517	6
01-05	24	519	6
01-05	25	521	6
01-05	26	523	6
01-05	27	526	6
01-05	28	528	6
01-05	29	530	7
01-05	30	533	7
01-05	31	536	7
01-05	32	539	7
01-05	33	542	8
01-05	34	546	8
01-05	35	550	9
01-05	36	555	10
01-05	37	562	11
01-05	38	570	13
01-05	39	583	17
01-05	40	600	34

Grade 6 Reading, Forms 6 – 10

Form	Raw Score	Scale Score	Conditional SEM
06-10	0	400	34
06-10	1	446	17
06-10	2	458	12
06-10	3	465	10
06-10	4	471	9
06-10	5	475	8
06-10	6	479	8
06-10	7	482	7
06-10	8	485	7
06-10	9	488	7
06-10	10	491	6
06-10	11	493	6
06-10	12	495	6
06-10	13	498	6
06-10	14	500	6
06-10	15	502	6
06-10	16	504	6
06-10	17	506	6
06-10	18	508	6
06-10	19	510	6
06-10	20	512	6
06-10	21	514	6
06-10	22	516	6
06-10	23	518	6
06-10	24	520	6
06-10	25	522	6
06-10	26	524	6
06-10	27	526	6
06-10	28	529	6
06-10	29	531	6
06-10	30	534	7
06-10	31	536	7
06-10	32	539	7
06-10	33	542	7
06-10	34	546	8
06-10	35	550	8
06-10	36	555	9
06-10	37	560	10
06-10	38	568	12
06-10	39	580	17
06-10	40	600	33

Grade 7 Reading, Forms 1 – 5

Form	Raw Score	Scale Score	Conditional SEM
01-05	0	400	34
01-05	1	438	17
01-05	2	450	12
01-05	3	458	10
01-05	4	464	9
01-05	5	468	8
01-05	6	472	8
01-05	7	476	7
01-05	8	479	7
01-05	9	482	7
01-05	10	484	6
01-05	11	487	6
01-05	12	489	6
01-05	13	491	6
01-05	14	493	6
01-05	15	495	6
01-05	16	497	6
01-05	17	499	6
01-05	18	501	6
01-05	19	503	6
01-05	20	505	6
01-05	21	506	6
01-05	22	508	6
01-05	23	510	6
01-05	24	512	6
01-05	25	514	6
01-05	26	516	6
01-05	27	518	6
01-05	28	520	6
01-05	29	522	6
01-05	30	524	6
01-05	31	526	6
01-05	32	528	6
01-05	33	530	6
01-05	34	533	7
01-05	35	535	7
01-05	36	538	7
01-05	37	542	8
01-05	38	546	8
01-05	39	550	9
01-05	40	556	10
01-05	41	563	12
01-05	42	575	17
01-05	43	599	34

Grade 7 Reading, Forms 6 – 10

Form	Raw Score	Scale Score	Conditional SEM
06-10	0	400	34
06-10	1	440	17
06-10	2	453	13
06-10	3	461	10
06-10	4	466	9
06-10	5	471	8
06-10	6	475	8
06-10	7	478	7
06-10	8	481	7
06-10	9	484	7
06-10	10	487	6
06-10	11	489	6
06-10	12	491	6
06-10	13	494	6
06-10	14	496	6
06-10	15	498	6
06-10	16	500	6
06-10	17	502	6
06-10	18	503	6
06-10	19	505	6
06-10	20	507	5
06-10	21	509	5
06-10	22	511	5
06-10	23	512	5
06-10	24	514	5
06-10	25	516	5
06-10	26	518	6
06-10	27	520	6
06-10	28	522	6
06-10	29	523	6
06-10	30	525	6
06-10	31	527	6
06-10	32	530	6
06-10	33	532	6
06-10	34	534	6
06-10	35	537	7
06-10	36	540	7
06-10	37	543	8
06-10	38	547	8
06-10	39	551	9
06-10	40	557	10
06-10	41	564	12
06-10	42	576	17
06-10	43	600	34

Grade 7 Reading, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	438	17
2	451	12
3	458	10
4	464	9
5	469	8
6	473	8
7	476	7
8	479	7
9	482	7
10	485	7
11	487	6
12	490	6
13	492	6
14	494	6
15	496	6
16	498	6
17	500	6
18	502	6
19	504	6
20	506	6
21	508	6
22	510	6
23	512	6
24	514	6
25	516	6
26	518	6
27	520	6
28	522	6
29	525	6
30	527	6
31	530	7
32	532	7
33	536	7
34	539	8
35	543	8
36	547	9
37	553	10
38	560	12
39	573	17
40	597	34

Grade 8 Reading, Forms 1 – 5

Form	Raw Score	Scale Score	Conditional SEM
01-05	0	400	34
01-05	1	436	17
01-05	2	448	13
01-05	3	456	11
01-05	4	462	9
01-05	5	467	9
01-05	6	471	8
01-05	7	475	8
01-05	8	478	7
01-05	9	481	7
01-05	10	484	7
01-05	11	486	6
01-05	12	489	6
01-05	13	491	6
01-05	14	493	6
01-05	15	495	6
01-05	16	497	6
01-05	17	499	6
01-05	18	501	6
01-05	19	503	6
01-05	20	505	6
01-05	21	507	6
01-05	22	509	6
01-05	23	511	6
01-05	24	513	6
01-05	25	515	6
01-05	26	517	6
01-05	27	519	6
01-05	28	521	6
01-05	29	523	6
01-05	30	526	6
01-05	31	528	6
01-05	32	531	7
01-05	33	533	7
01-05	34	536	7
01-05	35	540	8
01-05	36	543	8
01-05	37	548	9
01-05	38	553	10
01-05	39	559	11
01-05	40	567	13
01-05	41	580	18
01-05	42	600	34

Grade 8 Reading, Forms 6 – 10

Form	Raw Score	Scale Score	Conditional SEM
06-10	0	400	34
06-10	1	437	17
06-10	2	450	12
06-10	3	457	10
06-10	4	463	9
06-10	5	468	8
06-10	6	472	8
06-10	7	475	7
06-10	8	478	7
06-10	9	481	7
06-10	10	484	7
06-10	11	486	6
06-10	12	489	6
06-10	13	491	6
06-10	14	493	6
06-10	15	495	6
06-10	16	497	6
06-10	17	499	6
06-10	18	501	6
06-10	19	503	6
06-10	20	505	6
06-10	21	507	6
06-10	22	509	6
06-10	23	511	6
06-10	24	513	6
06-10	25	515	6
06-10	26	517	6
06-10	27	519	6
06-10	28	521	6
06-10	29	523	6
06-10	30	526	6
06-10	31	528	6
06-10	32	531	7
06-10	33	533	7
06-10	34	536	7
06-10	35	540	8
06-10	36	543	8
06-10	37	548	9
06-10	38	553	10
06-10	39	559	11
06-10	40	567	13
06-10	41	580	18
06-10	42	600	34

Grade 10 Reading, Forms 1 – 5

Form	Raw Score	Scale Score	Conditional SEM
01-05	0	400	34
01-05	1	445	17
01-05	2	457	12
01-05	3	465	10
01-05	4	471	9
01-05	5	475	8
01-05	6	479	8
01-05	7	482	7
01-05	8	485	7
01-05	9	488	7
01-05	10	490	6
01-05	11	493	6
01-05	12	495	6
01-05	13	497	6
01-05	14	499	6
01-05	15	501	6
01-05	16	503	6
01-05	17	505	6
01-05	18	507	5
01-05	19	508	5
01-05	20	510	5
01-05	21	512	5
01-05	22	514	5
01-05	23	515	5
01-05	24	517	5
01-05	25	519	5
01-05	26	521	6
01-05	27	523	6
01-05	28	524	6
01-05	29	526	6
01-05	30	528	6
01-05	31	530	6
01-05	32	533	6
01-05	33	535	6
01-05	34	537	7
01-05	35	540	7
01-05	36	543	7
01-05	37	546	8
01-05	38	550	8
01-05	39	555	9
01-05	40	560	10
01-05	41	568	12
01-05	42	580	17
01-05	43	600	34

Grade 10 Reading, Forms 6 – 10

Form	Raw Score	Scale Score	Conditional SEM
06-10	0	400	34
06-10	1	447	17
06-10	2	459	12
06-10	3	467	10
06-10	4	473	9
06-10	5	477	8
06-10	6	481	8
06-10	7	484	7
06-10	8	487	7
06-10	9	490	7
06-10	10	493	6
06-10	11	495	6
06-10	12	497	6
06-10	13	500	6
06-10	14	502	6
06-10	15	504	6
06-10	16	506	6
06-10	17	508	6
06-10	18	509	6
06-10	19	511	5
06-10	20	513	5
06-10	21	515	5
06-10	22	517	5
06-10	23	518	5
06-10	24	520	5
06-10	25	522	5
06-10	26	524	5
06-10	27	526	6
06-10	28	527	6
06-10	29	529	6
06-10	30	531	6
06-10	31	533	6
06-10	32	536	6
06-10	33	538	6
06-10	34	540	7
06-10	35	543	7
06-10	36	546	7
06-10	37	549	8
06-10	38	553	8
06-10	39	558	9
06-10	40	563	10
06-10	41	571	12
06-10	42	584	17
06-10	43	600	34

Grade 10 Reading, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	445	17
2	458	12
3	465	10
4	471	9
5	476	8
6	479	8
7	483	7
8	486	7
9	489	7
10	491	6
11	493	6
12	496	6
13	498	6
14	500	6
15	502	6
16	504	6
17	506	6
18	507	6
19	509	5
20	511	5
21	513	5
22	515	5
23	516	5
24	518	6
25	520	6
26	522	6
27	524	6
28	526	6
29	528	6
30	530	6
31	532	6
32	535	6
33	537	7
34	540	7
35	543	7
36	546	8
37	550	8
38	554	9
39	560	10
40	567	12
41	580	17
42	600	34

Grade 3 Mathematics, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	400	34
01	1	444	17
01	2	457	12
01	3	464	10
01	4	470	9
01	5	475	9
01	6	479	8
01	7	483	7
01	8	486	7
01	9	489	7
01	10	492	7
01	11	494	6
01	12	497	6
01	13	499	6
01	14	501	6
01	15	503	6
01	16	505	6
01	17	507	6
01	18	509	6
01	19	511	6
01	20	513	6
01	21	515	6
01	22	517	6
01	23	519	6
01	24	521	6
01	25	523	6
01	26	525	6
01	27	527	6
01	28	530	6
01	29	532	6
01	30	534	6
01	31	537	7
01	32	539	7
01	33	542	7
01	34	546	8
01	35	549	8
01	36	554	9
01	37	559	10
01	38	567	12
01	39	579	17
01	40	600	34

Grade 3 Mathematics, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	400	34
02	1	440	17
02	2	453	13
02	3	461	11
02	4	467	9
02	5	472	9
02	6	476	8
02	7	479	8
02	8	483	7
02	9	486	7
02	10	489	7
02	11	491	7
02	12	494	6
02	13	496	6
02	14	498	6
02	15	501	6
02	16	503	6
02	17	505	6
02	18	507	6
02	19	509	6
02	20	511	6
02	21	513	6
02	22	515	6
02	23	517	6
02	24	519	6
02	25	521	6
02	26	524	6
02	27	526	6
02	28	528	6
02	29	531	6
02	30	533	7
02	31	536	7
02	32	539	7
02	33	542	8
02	34	546	8
02	35	550	9
02	36	555	9
02	37	560	11
02	38	568	13
02	39	581	17
02	40	600	34

Grade 3 Mathematics, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	400	34
03	1	441	17
03	2	454	12
03	3	461	10
03	4	467	9
03	5	472	9
03	6	476	8
03	7	480	8
03	8	483	7
03	9	486	7
03	10	488	7
03	11	491	7
03	12	494	6
03	13	496	6
03	14	498	6
03	15	500	6
03	16	503	6
03	17	505	6
03	18	507	6
03	19	509	6
03	20	511	6
03	21	513	6
03	22	515	6
03	23	517	6
03	24	520	6
03	25	522	6
03	26	524	6
03	27	526	6
03	28	529	6
03	29	531	6
03	30	534	7
03	31	536	7
03	32	539	7
03	33	543	8
03	34	546	8
03	35	550	9
03	36	555	9
03	37	561	11
03	38	569	13
03	39	582	17
03	40	600	34

Grade 3 Mathematics, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	400	34
04	1	445	17
04	2	458	12
04	3	465	10
04	4	471	9
04	5	475	8
04	6	479	8
04	7	482	7
04	8	485	7
04	9	488	7
04	10	491	6
04	11	493	6
04	12	495	6
04	13	498	6
04	14	500	6
04	15	502	6
04	16	504	6
04	17	506	6
04	18	508	6
04	19	510	6
04	20	512	6
04	21	513	6
04	22	515	6
04	23	517	6
04	24	519	6
04	25	521	6
04	26	523	6
04	27	526	6
04	28	528	6
04	29	530	6
04	30	533	6
04	31	535	7
04	32	538	7
04	33	541	7
04	34	544	8
04	35	548	8
04	36	553	9
04	37	558	10
04	38	566	12
04	39	578	17
04	40	600	34

Grade 3 Mathematics, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	444	17
2	457	13
3	465	10
4	470	9
5	475	9
6	479	8
7	483	8
8	486	7
9	489	7
10	492	7
11	494	7
12	497	6
13	499	6
14	502	6
15	504	6
16	506	6
17	508	6
18	510	6
19	512	6
20	514	6
21	516	6
22	518	6
23	521	6
24	523	6
25	525	6
26	527	6
27	530	6
28	532	7
29	535	7
30	538	7
31	541	7
32	544	8
33	548	8
34	553	9
35	559	10
36	566	12
37	578	17
38	600	34

Grade 4 Mathematics, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	400	34
01	1	442	17
01	2	455	13
01	3	463	11
01	4	469	9
01	5	474	9
01	6	478	8
01	7	482	8
01	8	485	7
01	9	488	7
01	10	491	7
01	11	494	7
01	12	497	7
01	13	499	6
01	14	502	6
01	15	504	6
01	16	506	6
01	17	509	6
01	18	511	6
01	19	513	6
01	20	515	6
01	21	517	6
01	22	520	6
01	23	522	6
01	24	524	6
01	25	526	6
01	26	528	6
01	27	531	6
01	28	533	6
01	29	535	6
01	30	538	6
01	31	540	7
01	32	543	7
01	33	546	7
01	34	549	7
01	35	552	8
01	36	556	9
01	37	562	10
01	38	569	12
01	39	581	17
01	40	600	33

Grade 4 Mathematics, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	400	34
02	1	440	17
02	2	453	13
02	3	461	11
02	4	467	10
02	5	472	9
02	6	477	8
02	7	480	8
02	8	484	7
02	9	487	7
02	10	490	7
02	11	493	7
02	12	495	7
02	13	498	6
02	14	500	6
02	15	503	6
02	16	505	6
02	17	507	6
02	18	509	6
02	19	511	6
02	20	513	6
02	21	516	6
02	22	518	6
02	23	520	6
02	24	522	6
02	25	524	6
02	26	526	6
02	27	528	6
02	28	530	6
02	29	532	6
02	30	535	6
02	31	537	6
02	32	540	7
02	33	543	7
02	34	546	7
02	35	549	8
02	36	554	9
02	37	559	10
02	38	566	12
02	39	578	17
02	40	600	33

Grade 4 Mathematics, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	400	34
03	1	442	17
03	2	455	13
03	3	462	11
03	4	468	9
03	5	473	9
03	6	477	8
03	7	481	8
03	8	484	7
03	9	487	7
03	10	490	7
03	11	493	7
03	12	495	6
03	13	498	6
03	14	500	6
03	15	502	6
03	16	504	6
03	17	506	6
03	18	509	6
03	19	511	6
03	20	513	6
03	21	515	6
03	22	517	6
03	23	519	6
03	24	521	6
03	25	523	6
03	26	525	6
03	27	527	6
03	28	530	6
03	29	532	6
03	30	535	7
03	31	538	7
03	32	541	7
03	33	544	7
03	34	547	8
03	35	551	9
03	36	556	9
03	37	562	11
03	38	570	13
03	39	583	17
03	40	600	34

Grade 4 Mathematics, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	400	34
04	1	440	17
04	2	453	13
04	3	461	11
04	4	467	10
04	5	472	9
04	6	477	8
04	7	480	8
04	8	484	7
04	9	487	7
04	10	490	7
04	11	493	7
04	12	495	7
04	13	498	6
04	14	500	6
04	15	503	6
04	16	505	6
04	17	507	6
04	18	509	6
04	19	511	6
04	20	513	6
04	21	515	6
04	22	517	6
04	23	519	6
04	24	521	6
04	25	523	6
04	26	526	6
04	27	528	6
04	28	530	6
04	29	532	6
04	30	534	6
04	31	537	6
04	32	539	7
04	33	542	7
04	34	545	7
04	35	549	8
04	36	553	9
04	37	559	10
04	38	566	12
04	39	578	17
04	40	600	33

Grade 5 Mathematics, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	400	33
01	1	441	17
01	2	453	12
01	3	461	10
01	4	466	9
01	5	470	8
01	6	474	8
01	7	477	7
01	8	480	7
01	9	483	7
01	10	485	6
01	11	488	6
01	12	490	6
01	13	492	6
01	14	494	6
01	15	496	6
01	16	498	6
01	17	500	6
01	18	502	6
01	19	504	6
01	20	506	6
01	21	508	6
01	22	510	6
01	23	512	6
01	24	514	6
01	25	516	6
01	26	518	6
01	27	520	6
01	28	522	6
01	29	524	6
01	30	526	6
01	31	528	6
01	32	531	6
01	33	533	7
01	34	536	7
01	35	540	8
01	36	544	9
01	37	548	10
01	38	555	12
01	39	567	17
01	40	590	33

Grade 5 Mathematics, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	400	34
02	1	440	17
02	2	453	12
02	3	460	10
02	4	466	9
02	5	470	8
02	6	474	8
02	7	478	7
02	8	481	7
02	9	484	7
02	10	486	7
02	11	489	6
02	12	491	6
02	13	493	6
02	14	495	6
02	15	498	6
02	16	500	6
02	17	502	6
02	18	503	6
02	19	505	6
02	20	507	6
02	21	509	6
02	22	511	6
02	23	513	6
02	24	515	6
02	25	517	6
02	26	518	6
02	27	520	6
02	28	522	6
02	29	524	6
02	30	527	6
02	31	529	6
02	32	531	6
02	33	534	7
02	34	537	7
02	35	540	8
02	36	544	9
02	37	549	10
02	38	557	12
02	39	568	17
02	40	592	33

Grade 5 Mathematics, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	400	33
03	1	444	17
03	2	456	12
03	3	463	10
03	4	468	9
03	5	473	8
03	6	476	8
03	7	479	7
03	8	482	7
03	9	485	7
03	10	488	6
03	11	490	6
03	12	492	6
03	13	494	6
03	14	496	6
03	15	499	6
03	16	501	6
03	17	503	6
03	18	505	6
03	19	506	6
03	20	508	6
03	21	510	6
03	22	512	6
03	23	514	6
03	24	516	6
03	25	518	6
03	26	520	6
03	27	522	6
03	28	524	6
03	29	526	6
03	30	528	6
03	31	530	6
03	32	533	6
03	33	535	7
03	34	538	7
03	35	542	8
03	36	546	9
03	37	551	10
03	38	558	12
03	39	569	17
03	40	593	33

Grade 5 Mathematics, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	400	34
04	1	442	17
04	2	454	12
04	3	462	10
04	4	467	9
04	5	472	8
04	6	476	8
04	7	479	7
04	8	482	7
04	9	485	7
04	10	488	7
04	11	490	6
04	12	493	6
04	13	495	6
04	14	497	6
04	15	499	6
04	16	501	6
04	17	503	6
04	18	505	6
04	19	507	6
04	20	508	6
04	21	510	5
04	22	512	5
04	23	514	5
04	24	516	5
04	25	518	6
04	26	519	6
04	27	521	6
04	28	523	6
04	29	525	6
04	30	527	6
04	31	530	6
04	32	532	6
04	33	535	7
04	34	537	7
04	35	541	8
04	36	545	9
04	37	550	10
04	38	557	12
04	39	569	17
04	40	592	33

Grade 6 Mathematics, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	400	34
01	1	443	17
01	2	455	12
01	3	463	10
01	4	468	9
01	5	473	8
01	6	476	8
01	7	480	7
01	8	483	7
01	9	486	7
01	10	488	6
01	11	490	6
01	12	493	6
01	13	495	6
01	14	497	6
01	15	499	6
01	16	501	6
01	17	503	6
01	18	504	5
01	19	506	5
01	20	508	5
01	21	510	5
01	22	511	5
01	23	513	5
01	24	515	5
01	25	516	5
01	26	518	5
01	27	520	6
01	28	522	6
01	29	524	6
01	30	526	6
01	31	528	6
01	32	531	6
01	33	533	7
01	34	536	7
01	35	540	8
01	36	544	9
01	37	549	10
01	38	556	12
01	39	568	17
01	40	592	33

Grade 6 Mathematics, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	400	33
02	1	443	17
02	2	455	12
02	3	462	10
02	4	468	9
02	5	472	8
02	6	476	8
02	7	479	7
02	8	482	7
02	9	485	7
02	10	488	6
02	11	490	6
02	12	492	6
02	13	495	6
02	14	497	6
02	15	499	6
02	16	501	6
02	17	502	6
02	18	504	5
02	19	506	5
02	20	508	5
02	21	509	5
02	22	511	5
02	23	513	5
02	24	515	5
02	25	516	5
02	26	518	5
02	27	520	6
02	28	522	6
02	29	524	6
02	30	526	6
02	31	528	6
02	32	531	6
02	33	533	7
02	34	536	7
02	35	540	8
02	36	544	9
02	37	549	10
02	38	556	12
02	39	568	17
02	40	592	33

Grade 6 Mathematics, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	400	34
03	1	442	18
03	2	455	13
03	3	463	11
03	4	469	9
03	5	474	8
03	6	478	8
03	7	481	7
03	8	484	7
03	9	487	7
03	10	490	6
03	11	492	6
03	12	494	6
03	13	496	6
03	14	498	6
03	15	500	6
03	16	502	6
03	17	504	6
03	18	506	5
03	19	508	5
03	20	509	5
03	21	511	5
03	22	513	5
03	23	515	5
03	24	516	5
03	25	518	6
03	26	520	6
03	27	522	6
03	28	524	6
03	29	526	6
03	30	528	6
03	31	531	6
03	32	533	7
03	33	536	7
03	34	539	7
03	35	543	8
03	36	547	9
03	37	553	10
03	38	560	12
03	39	572	17
03	40	596	33

Grade 6 Mathematics, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	400	34
04	1	442	18
04	2	456	13
04	3	464	11
04	4	470	9
04	5	474	8
04	6	478	8
04	7	482	7
04	8	485	7
04	9	488	7
04	10	490	6
04	11	492	6
04	12	495	6
04	13	497	6
04	14	499	6
04	15	501	6
04	16	503	6
04	17	504	6
04	18	506	5
04	19	508	5
04	20	510	5
04	21	512	5
04	22	513	5
04	23	515	5
04	24	517	5
04	25	519	6
04	26	520	6
04	27	522	6
04	28	524	6
04	29	526	6
04	30	529	6
04	31	531	6
04	32	534	7
04	33	536	7
04	34	540	7
04	35	543	8
04	36	548	9
04	37	553	10
04	38	560	12
04	39	572	17
04	40	596	33

Grade 7 Mathematics, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	400	34
01	1	451	17
01	2	463	12
01	3	470	10
01	4	476	9
01	5	480	8
01	6	484	8
01	7	488	7
01	8	491	7
01	9	493	7
01	10	496	6
01	11	498	6
01	12	500	6
01	13	503	6
01	14	505	6
01	15	507	6
01	16	508	6
01	17	510	6
01	18	512	5
01	19	514	5
01	20	516	5
01	21	518	5
01	22	519	5
01	23	521	5
01	24	523	5
01	25	525	6
01	26	526	6
01	27	528	6
01	28	530	6
01	29	532	6
01	30	535	6
01	31	537	6
01	32	539	7
01	33	542	7
01	34	545	7
01	35	549	8
01	36	553	9
01	37	559	10
01	38	566	12
01	39	578	17
01	40	600	34

Grade 7 Mathematics, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	400	34
02	1	447	17
02	2	459	12
02	3	467	10
02	4	473	9
02	5	477	8
02	6	481	8
02	7	484	7
02	8	487	7
02	9	490	7
02	10	493	6
02	11	495	6
02	12	498	6
02	13	500	6
02	14	502	6
02	15	504	6
02	16	506	6
02	17	508	6
02	18	509	6
02	19	511	6
02	20	513	6
02	21	515	6
02	22	517	6
02	23	519	6
02	24	520	6
02	25	522	6
02	26	524	6
02	27	526	6
02	28	528	6
02	29	531	6
02	30	533	6
02	31	536	7
02	32	538	7
02	33	541	7
02	34	545	8
02	35	548	8
02	36	553	9
02	37	559	10
02	38	566	12
02	39	579	17
02	40	600	34

Grade 7 Mathematics, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	400	34
03	1	449	17
03	2	462	12
03	3	469	10
03	4	475	9
03	5	479	8
03	6	483	8
03	7	487	7
03	8	490	7
03	9	492	7
03	10	495	6
03	11	497	6
03	12	500	6
03	13	502	6
03	14	504	6
03	15	506	6
03	16	508	6
03	17	510	6
03	18	511	6
03	19	513	6
03	20	515	6
03	21	517	5
03	22	519	6
03	23	521	6
03	24	522	6
03	25	524	6
03	26	526	6
03	27	528	6
03	28	530	6
03	29	532	6
03	30	535	6
03	31	537	6
03	32	540	7
03	33	542	7
03	34	546	7
03	35	549	8
03	36	553	9
03	37	559	10
03	38	566	12
03	39	578	17
03	40	600	33

Grade 7 Mathematics, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	400	34
04	1	446	17
04	2	458	12
04	3	466	10
04	4	472	9
04	5	476	8
04	6	480	8
04	7	484	7
04	8	487	7
04	9	489	7
04	10	492	6
04	11	494	6
04	12	497	6
04	13	499	6
04	14	501	6
04	15	503	6
04	16	505	6
04	17	507	6
04	18	509	6
04	19	511	6
04	20	512	6
04	21	514	6
04	22	516	6
04	23	518	6
04	24	520	6
04	25	522	6
04	26	524	6
04	27	526	6
04	28	528	6
04	29	530	6
04	30	532	6
04	31	535	7
04	32	538	7
04	33	540	7
04	34	544	8
04	35	548	8
04	36	552	9
04	37	558	10
04	38	565	12
04	39	578	17
04	40	600	34

Grade 8 Mathematics, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	400	34
01	1	446	17
01	2	459	12
01	3	466	10
01	4	472	9
01	5	476	8
01	6	480	8
01	7	484	7
01	8	487	7
01	9	489	7
01	10	492	6
01	11	494	6
01	12	497	6
01	13	499	6
01	14	501	6
01	15	503	6
01	16	505	6
01	17	507	6
01	18	509	6
01	19	511	6
01	20	513	6
01	21	514	5
01	22	516	5
01	23	518	6
01	24	520	6
01	25	522	6
01	26	524	6
01	27	525	6
01	28	528	6
01	29	530	6
01	30	532	6
01	31	534	6
01	32	537	7
01	33	540	7
01	34	543	8
01	35	547	8
01	36	551	9
01	37	557	10
01	38	565	13
01	39	578	17
01	40	600	34

Grade 8 Mathematics, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	400	34
02	1	445	17
02	2	457	12
02	3	465	10
02	4	471	9
02	5	475	8
02	6	479	8
02	7	483	7
02	8	486	7
02	9	489	7
02	10	491	7
02	11	494	6
02	12	496	6
02	13	498	6
02	14	501	6
02	15	503	6
02	16	505	6
02	17	506	6
02	18	508	6
02	19	510	5
02	20	512	5
02	21	514	5
02	22	515	5
02	23	517	5
02	24	519	5
02	25	521	6
02	26	523	6
02	27	525	6
02	28	527	6
02	29	529	6
02	30	531	6
02	31	533	6
02	32	536	7
02	33	539	7
02	34	542	8
02	35	545	8
02	36	550	9
02	37	555	10
02	38	563	12
02	39	575	17
02	40	599	34

Grade 8 Mathematics, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	400	34
03	1	445	17
03	2	458	12
03	3	465	10
03	4	471	9
03	5	475	8
03	6	479	8
03	7	482	7
03	8	485	7
03	9	488	7
03	10	491	6
03	11	493	6
03	12	495	6
03	13	497	6
03	14	499	6
03	15	501	6
03	16	503	6
03	17	505	6
03	18	507	5
03	19	509	5
03	20	510	5
03	21	512	5
03	22	514	5
03	23	516	5
03	24	517	5
03	25	519	6
03	26	521	6
03	27	523	6
03	28	525	6
03	29	527	6
03	30	529	6
03	31	532	6
03	32	535	7
03	33	537	7
03	34	541	8
03	35	544	8
03	36	549	9
03	37	554	10
03	38	561	12
03	39	573	17
03	40	597	33

Grade 8 Mathematics, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	400	34
04	1	443	17
04	2	456	12
04	3	463	10
04	4	469	9
04	5	473	8
04	6	477	8
04	7	481	7
04	8	484	7
04	9	487	7
04	10	489	6
04	11	492	6
04	12	494	6
04	13	496	6
04	14	498	6
04	15	500	6
04	16	502	6
04	17	504	6
04	18	506	6
04	19	508	5
04	20	510	5
04	21	511	5
04	22	513	5
04	23	515	5
04	24	517	5
04	25	518	5
04	26	520	6
04	27	522	6
04	28	524	6
04	29	526	6
04	30	528	6
04	31	531	6
04	32	533	7
04	33	536	7
04	34	539	7
04	35	542	8
04	36	547	9
04	37	552	10
04	38	559	12
04	39	571	17
04	40	595	34

Grade 10 Mathematics, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	400	34
01	1	447	17
01	2	459	12
01	3	467	10
01	4	472	9
01	5	477	8
01	6	481	8
01	7	484	7
01	8	487	7
01	9	490	7
01	10	492	6
01	11	495	6
01	12	497	6
01	13	499	6
01	14	502	6
01	15	504	6
01	16	506	6
01	17	508	6
01	18	510	6
01	19	511	6
01	20	513	6
01	21	515	6
01	22	517	6
01	23	519	6
01	24	521	6
01	25	523	6
01	26	525	6
01	27	527	6
01	28	529	6
01	29	531	6
01	30	534	6
01	31	536	7
01	32	539	7
01	33	542	7
01	34	545	8
01	35	549	8
01	36	553	9
01	37	559	10
01	38	567	12
01	39	579	17
01	40	600	34

Grade 10 Mathematics, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	400	34
02	1	449	17
02	2	461	12
02	3	469	10
02	4	474	9
02	5	479	8
02	6	482	8
02	7	486	7
02	8	489	7
02	9	491	7
02	10	494	6
02	11	496	6
02	12	499	6
02	13	501	6
02	14	503	6
02	15	505	6
02	16	507	6
02	17	509	6
02	18	510	6
02	19	512	6
02	20	514	6
02	21	516	6
02	22	518	6
02	23	520	6
02	24	521	6
02	25	523	6
02	26	525	6
02	27	527	6
02	28	529	6
02	29	532	6
02	30	534	6
02	31	537	7
02	32	539	7
02	33	542	7
02	34	546	8
02	35	550	8
02	36	555	9
02	37	560	11
02	38	569	13
02	39	582	18
02	40	600	34

Grade 10 Mathematics, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	400	33
03	1	447	17
03	2	459	12
03	3	466	10
03	4	472	9
03	5	476	8
03	6	480	8
03	7	483	7
03	8	486	7
03	9	489	7
03	10	491	6
03	11	494	6
03	12	496	6
03	13	498	6
03	14	500	6
03	15	502	6
03	16	504	6
03	17	506	6
03	18	508	6
03	19	509	6
03	20	511	6
03	21	513	6
03	22	515	6
03	23	517	6
03	24	519	6
03	25	520	6
03	26	522	6
03	27	525	6
03	28	527	6
03	29	529	6
03	30	531	7
03	31	534	7
03	32	537	7
03	33	540	8
03	34	544	8
03	35	548	9
03	36	553	10
03	37	559	11
03	38	568	13
03	39	581	18
03	40	600	34

Grade 10 Mathematics, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	400	34
04	1	445	17
04	2	457	12
04	3	465	10
04	4	470	9
04	5	475	8
04	6	478	8
04	7	482	7
04	8	485	7
04	9	488	7
04	10	490	6
04	11	492	6
04	12	495	6
04	13	497	6
04	14	499	6
04	15	501	6
04	16	503	6
04	17	505	6
04	18	507	6
04	19	509	6
04	20	510	6
04	21	512	6
04	22	514	6
04	23	516	6
04	24	518	6
04	25	520	6
04	26	522	6
04	27	524	6
04	28	526	6
04	29	528	6
04	30	531	7
04	31	534	7
04	32	537	7
04	33	540	8
04	34	544	8
04	35	548	9
04	36	553	10
04	37	559	11
04	38	567	13
04	39	581	18
04	40	600	34

Grade 10 Mathematics, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	447	17
2	460	12
3	467	10
4	473	9
5	477	8
6	481	8
7	485	7
8	488	7
9	491	7
10	493	7
11	496	6
12	498	6
13	500	6
14	502	6
15	505	6
16	507	6
17	509	6
18	511	6
19	512	6
20	514	6
21	516	6
22	518	6
23	520	6
24	522	6
25	524	6
26	526	6
27	528	6
28	531	6
29	533	6
30	536	7
31	538	7
32	541	7
33	545	8
34	549	8
35	553	9
36	559	10
37	566	12
38	579	17
39	600	34

Grade 4 Science, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	700	34
01	1	728	17
01	2	741	13
01	3	749	11
01	4	755	10
01	5	760	9
01	6	764	8
01	7	768	8
01	8	772	8
01	9	775	7
01	10	778	7
01	11	781	7
01	12	784	7
01	13	786	7
01	14	789	7
01	15	791	6
01	16	794	6
01	17	796	6
01	18	799	6
01	19	801	6
01	20	803	6
01	21	806	6
01	22	808	6
01	23	811	6
01	24	813	6
01	25	815	6
01	26	818	7
01	27	821	7
01	28	823	7
01	29	826	7
01	30	829	7
01	31	833	7
01	32	836	8
01	33	840	8
01	34	844	9
01	35	849	9
01	36	854	10
01	37	862	12
01	38	874	17
01	39	897	33

Grade 4 Science, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	700	34
02	1	730	17
02	2	743	12
02	3	750	10
02	4	756	9
02	5	761	9
02	6	765	8
02	7	768	8
02	8	772	7
02	9	775	7
02	10	778	7
02	11	780	7
02	12	783	7
02	13	786	6
02	14	788	6
02	15	790	6
02	16	793	6
02	17	795	6
02	18	797	6
02	19	799	6
02	20	802	6
02	21	804	6
02	22	806	6
02	23	809	6
02	24	811	6
02	25	813	6
02	26	816	6
02	27	818	7
02	28	821	7
02	29	824	7
02	30	827	7
02	31	830	7
02	32	834	8
02	33	837	8
02	34	842	9
02	35	846	9
02	36	852	10
02	37	860	12
02	38	871	17
02	39	894	33

Grade 4 Science, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	700	34
03	1	730	17
03	2	743	13
03	3	750	10
03	4	756	9
03	5	761	9
03	6	765	8
03	7	769	8
03	8	772	7
03	9	775	7
03	10	778	7
03	11	781	7
03	12	783	7
03	13	786	6
03	14	788	6
03	15	791	6
03	16	793	6
03	17	796	6
03	18	798	6
03	19	800	6
03	20	803	6
03	21	805	6
03	22	807	6
03	23	810	6
03	24	812	6
03	25	815	7
03	26	817	7
03	27	820	7
03	28	823	7
03	29	826	7
03	30	829	7
03	31	832	8
03	32	836	8
03	33	839	8
03	34	844	9
03	35	848	9
03	36	854	10
03	37	862	12
03	38	873	17
03	39	897	33

Grade 4 Science, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	700	34
04	1	728	17
04	2	740	13
04	3	748	11
04	4	754	9
04	5	759	9
04	6	763	8
04	7	767	8
04	8	770	7
04	9	774	7
04	10	777	7
04	11	780	7
04	12	782	7
04	13	785	7
04	14	788	7
04	15	790	7
04	16	793	6
04	17	795	6
04	18	798	6
04	19	800	6
04	20	803	6
04	21	805	6
04	22	808	7
04	23	811	7
04	24	813	7
04	25	816	7
04	26	819	7
04	27	821	7
04	28	824	7
04	29	828	7
04	30	831	8
04	31	835	8
04	32	838	8
04	33	843	9
04	34	847	9
04	35	853	10
04	36	861	12
04	37	873	17
04	38	896	33

Grade 4 Science, Form 5

Form	Raw Score	Scale Score	Conditional SEM
05	0	700	34
05	1	733	17
05	2	746	12
05	3	753	10
05	4	759	9
05	5	764	9
05	6	768	8
05	7	771	8
05	8	775	7
05	9	778	7
05	10	780	7
05	11	783	7
05	12	786	6
05	13	788	6
05	14	790	6
05	15	793	6
05	16	795	6
05	17	797	6
05	18	799	6
05	19	801	6
05	20	803	6
05	21	805	6
05	22	807	6
05	23	810	6
05	24	812	6
05	25	814	6
05	26	816	6
05	27	819	6
05	28	821	7
05	29	824	7
05	30	827	7
05	31	830	7
05	32	833	8
05	33	837	8
05	34	841	9
05	35	846	9
05	36	852	10
05	37	859	12
05	38	871	17
05	39	894	33

Grade 4 Science, Form 6

Form	Raw Score	Scale Score	Conditional SEM
06	0	700	34
06	1	729	18
06	2	743	13
06	3	751	11
06	4	757	10
06	5	762	9
06	6	767	8
06	7	771	8
06	8	774	8
06	9	778	7
06	10	781	7
06	11	784	7
06	12	786	7
06	13	789	7
06	14	792	6
06	15	794	6
06	16	796	6
06	17	799	6
06	18	801	6
06	19	804	6
06	20	806	6
06	21	808	6
06	22	810	6
06	23	813	6
06	24	815	6
06	25	817	6
06	26	820	6
06	27	822	6
06	28	825	7
06	29	828	7
06	30	830	7
06	31	834	7
06	32	837	8
06	33	841	8
06	34	846	9
06	35	852	11
06	36	860	13
06	37	874	18
06	38	900	34

Grade 4 Science, Form 7

Form	Raw Score	Scale Score	Conditional SEM
07	0	700	34
07	1	731	17
07	2	744	12
07	3	751	10
07	4	757	9
07	5	762	8
07	6	766	8
07	7	769	7
07	8	772	7
07	9	775	7
07	10	778	7
07	11	781	7
07	12	783	6
07	13	785	6
07	14	788	6
07	15	790	6
07	16	792	6
07	17	794	6
07	18	797	6
07	19	799	6
07	20	801	6
07	21	803	6
07	22	805	6
07	23	807	6
07	24	810	6
07	25	812	6
07	26	814	6
07	27	817	6
07	28	820	7
07	29	822	7
07	30	825	7
07	31	828	7
07	32	832	8
07	33	835	8
07	34	840	9
07	35	845	10
07	36	851	11
07	37	860	13
07	38	874	18
07	39	900	34

Grade 4 Science, Form 8

Form	Raw Score	Scale Score	Conditional SEM
08	0	700	34
08	1	733	17
08	2	746	13
08	3	754	11
08	4	760	9
08	5	764	9
08	6	769	8
08	7	772	8
08	8	776	7
08	9	779	7
08	10	782	7
08	11	784	7
08	12	787	7
08	13	789	6
08	14	792	6
08	15	794	6
08	16	797	6
08	17	799	6
08	18	801	6
08	19	803	6
08	20	806	6
08	21	808	6
08	22	810	6
08	23	812	6
08	24	815	6
08	25	817	6
08	26	820	6
08	27	822	7
08	28	825	7
08	29	827	7
08	30	830	7
08	31	833	7
08	32	837	8
08	33	840	8
08	34	844	9
08	35	849	10
08	36	856	11
08	37	864	13
08	38	878	18
08	39	900	34

Grade 4 Science, Form 9

Form	Raw Score	Scale Score	Conditional SEM
09	0	700	34
09	1	734	17
09	2	746	13
09	3	754	10
09	4	760	9
09	5	765	9
09	6	769	8
09	7	772	8
09	8	776	7
09	9	779	7
09	10	781	7
09	11	784	7
09	12	787	6
09	13	789	6
09	14	791	6
09	15	794	6
09	16	796	6
09	17	798	6
09	18	800	6
09	19	802	6
09	20	805	6
09	21	807	6
09	22	809	6
09	23	811	6
09	24	813	6
09	25	816	6
09	26	818	6
09	27	821	6
09	28	823	7
09	29	826	7
09	30	829	7
09	31	832	7
09	32	835	8
09	33	839	8
09	34	843	9
09	35	848	10
09	36	854	11
09	37	863	13
09	38	877	18
09	39	900	34

Grade 4 Science, Form 10

Form	Raw Score	Scale Score	Conditional SEM
10	0	700	34
10	1	735	17
10	2	748	12
10	3	756	10
10	4	761	9
10	5	766	8
10	6	770	8
10	7	773	7
10	8	777	7
10	9	779	7
10	10	782	7
10	11	785	6
10	12	787	6
10	13	789	6
10	14	792	6
10	15	794	6
10	16	796	6
10	17	798	6
10	18	800	6
10	19	802	6
10	20	804	6
10	21	806	6
10	22	808	6
10	23	811	6
10	24	813	6
10	25	815	6
10	26	817	6
10	27	819	6
10	28	822	6
10	29	825	7
10	30	827	7
10	31	830	7
10	32	834	8
10	33	837	8
10	34	841	9
10	35	846	10
10	36	853	11
10	37	861	13
10	38	875	18
10	39	900	34

Grade 4 Science, Form 11

Form	Raw Score	Scale Score	Conditional SEM
11	0	700	34
11	1	734	17
11	2	746	12
11	3	754	10
11	4	760	9
11	5	765	9
11	6	769	8
11	7	772	8
11	8	776	7
11	9	779	7
11	10	782	7
11	11	785	7
11	12	787	7
11	13	790	7
11	14	793	6
11	15	795	6
11	16	797	6
11	17	800	6
11	18	802	6
11	19	805	6
11	20	807	6
11	21	810	6
11	22	812	6
11	23	814	6
11	24	817	6
11	25	819	6
11	26	822	7
11	27	824	7
11	28	827	7
11	29	830	7
11	30	833	7
11	31	836	7
11	32	839	8
11	33	843	8
11	34	848	9
11	35	853	10
11	36	861	12
11	37	873	17
11	38	897	34

Grade 4 Science, Form 12

Form	Raw Score	Scale Score	Conditional SEM
12	0	700	34
12	1	730	17
12	2	742	12
12	3	750	10
12	4	755	9
12	5	760	8
12	6	764	8
12	7	768	7
12	8	771	7
12	9	774	7
12	10	776	7
12	11	779	7
12	12	781	6
12	13	784	6
12	14	786	6
12	15	788	6
12	16	791	6
12	17	793	6
12	18	795	6
12	19	797	6
12	20	800	6
12	21	802	6
12	22	804	6
12	23	806	6
12	24	809	6
12	25	811	6
12	26	814	6
12	27	816	7
12	28	819	7
12	29	822	7
12	30	825	7
12	31	828	7
12	32	831	8
12	33	835	8
12	34	839	9
12	35	844	9
12	36	850	11
12	37	858	13
12	38	870	17
12	39	894	34

Grade 4 Science, Form 13

Form	Raw Score	Scale Score	Conditional SEM
13	0	700	34
13	1	730	17
13	2	743	13
13	3	751	11
13	4	757	9
13	5	762	9
13	6	766	8
13	7	770	8
13	8	773	7
13	9	776	7
13	10	779	7
13	11	782	7
13	12	785	7
13	13	787	6
13	14	790	6
13	15	792	6
13	16	794	6
13	17	797	6
13	18	799	6
13	19	801	6
13	20	803	6
13	21	806	6
13	22	808	6
13	23	810	6
13	24	813	6
13	25	815	6
13	26	817	6
13	27	820	6
13	28	822	7
13	29	825	7
13	30	828	7
13	31	831	7
13	32	834	7
13	33	837	8
13	34	841	8
13	35	846	9
13	36	852	10
13	37	859	12
13	38	872	17
13	39	895	34

Grade 4 Science, Form 14

Form	Raw Score	Scale Score	Conditional SEM
14	0	700	34
14	1	731	17
14	2	744	13
14	3	752	11
14	4	758	9
14	5	763	9
14	6	767	8
14	7	771	8
14	8	774	7
14	9	777	7
14	10	780	7
14	11	783	7
14	12	786	7
14	13	788	7
14	14	791	7
14	15	793	6
14	16	796	6
14	17	798	6
14	18	801	6
14	19	803	6
14	20	806	6
14	21	808	6
14	22	810	6
14	23	813	6
14	24	815	6
14	25	818	6
14	26	820	7
14	27	823	7
14	28	826	7
14	29	828	7
14	30	831	7
14	31	835	8
14	32	838	8
14	33	842	8
14	34	847	9
14	35	853	10
14	36	860	12
14	37	873	17
14	38	897	34

Grade 4 Science, Form 15

Form	Raw Score	Scale Score	Conditional SEM
15	0	700	34
15	1	734	17
15	2	746	12
15	3	754	10
15	4	760	9
15	5	764	9
15	6	768	8
15	7	772	8
15	8	775	7
15	9	778	7
15	10	781	7
15	11	784	7
15	12	786	6
15	13	789	6
15	14	791	6
15	15	794	6
15	16	796	6
15	17	798	6
15	18	801	6
15	19	803	6
15	20	805	6
15	21	807	6
15	22	809	6
15	23	812	6
15	24	814	6
15	25	816	6
15	26	819	6
15	27	821	6
15	28	824	7
15	29	826	7
15	30	829	7
15	31	832	7
15	32	835	7
15	33	839	8
15	34	843	8
15	35	847	9
15	36	853	10
15	37	860	12
15	38	873	17
15	39	897	34

Grade 4 Science, Paper Form

Raw Score	Scale Score	Conditional SEM
0	700	34
1	728	17
2	741	13
3	749	11
4	756	10
5	761	9
6	765	8
7	769	8
8	773	8
9	776	7
10	779	7
11	782	7
12	785	7
13	788	7
14	791	7
15	794	7
16	796	7
17	799	7
18	801	7
19	804	6
20	806	7
21	809	7
22	811	7
23	814	7
24	817	7
25	819	7
26	822	7
27	825	7
28	828	7
29	832	8
30	835	8
31	839	8
32	843	9
33	848	9
34	854	10
35	861	12
36	873	17
37	897	33

Grade 4 Science, Braille Form

Raw Score	Scale Score	Conditional SEM
0	700	34
1	741	17
2	754	13
3	762	11
4	769	10
5	774	9
6	778	9
7	783	8
8	786	8
9	790	8
10	793	7
11	796	7
12	799	7
13	802	7
14	805	7
15	808	7
16	811	7
17	813	7
18	816	7
19	819	7
20	822	7
21	825	7
22	828	7
23	832	8
24	836	8
25	840	8
26	844	9
27	849	10
28	855	11
29	864	13
30	877	18
31	900	34

Grade 7 Science, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	700	34
01	1	730	17
01	2	742	12
01	3	750	10
01	4	755	9
01	5	760	8
01	6	764	8
01	7	767	7
01	8	771	7
01	9	773	7
01	10	776	7
01	11	779	6
01	12	781	6
01	13	783	6
01	14	785	6
01	15	788	6
01	16	790	6
01	17	792	6
01	18	794	6
01	19	796	6
01	20	798	6
01	21	800	6
01	22	802	6
01	23	803	6
01	24	805	6
01	25	807	6
01	26	810	6
01	27	812	6
01	28	814	6
01	29	816	6
01	30	818	6
01	31	821	6
01	32	823	7
01	33	826	7
01	34	829	7
01	35	832	8
01	36	835	8
01	37	840	9
01	38	845	10
01	39	851	11
01	40	861	14
01	41	878	20
01	42	900	35

Grade 7 Science, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	700	34
02	1	731	17
02	2	743	12
02	3	750	10
02	4	756	9
02	5	760	8
02	6	764	8
02	7	768	7
02	8	771	7
02	9	773	7
02	10	776	6
02	11	778	6
02	12	781	6
02	13	783	6
02	14	785	6
02	15	787	6
02	16	789	6
02	17	791	6
02	18	793	6
02	19	795	6
02	20	797	6
02	21	799	6
02	22	801	6
02	23	803	6
02	24	805	6
02	25	807	6
02	26	809	6
02	27	811	6
02	28	813	6
02	29	815	6
02	30	817	6
02	31	820	6
02	32	822	6
02	33	825	7
02	34	827	7
02	35	830	7
02	36	834	8
02	37	837	8
02	38	842	9
02	39	847	10
02	40	855	12
02	41	867	17
02	42	891	34

Grade 7 Science, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	700	34
03	1	730	17
03	2	742	12
03	3	750	10
03	4	755	9
03	5	760	8
03	6	763	8
03	7	767	7
03	8	770	7
03	9	772	7
03	10	775	6
03	11	777	6
03	12	780	6
03	13	782	6
03	14	784	6
03	15	786	6
03	16	788	6
03	17	790	6
03	18	792	6
03	19	794	6
03	20	795	6
03	21	797	6
03	22	799	6
03	23	801	6
03	24	803	6
03	25	805	6
03	26	807	6
03	27	809	6
03	28	811	6
03	29	813	6
03	30	815	6
03	31	817	6
03	32	819	6
03	33	822	6
03	34	824	7
03	35	827	7
03	36	830	7
03	37	833	8
03	38	836	8
03	39	841	9
03	40	846	10
03	41	854	12
03	42	866	17
03	43	889	33

Grade 7 Science, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	700	34
04	1	730	17
04	2	742	12
04	3	749	10
04	4	755	9
04	5	760	8
04	6	763	8
04	7	767	7
04	8	770	7
04	9	773	7
04	10	775	6
04	11	778	6
04	12	780	6
04	13	782	6
04	14	784	6
04	15	786	6
04	16	788	6
04	17	790	6
04	18	792	6
04	19	794	6
04	20	796	6
04	21	798	6
04	22	799	6
04	23	801	6
04	24	803	6
04	25	805	6
04	26	807	6
04	27	809	6
04	28	811	6
04	29	813	6
04	30	815	6
04	31	817	6
04	32	819	6
04	33	822	6
04	34	824	6
04	35	827	7
04	36	830	7
04	37	833	7
04	38	836	8
04	39	841	9
04	40	846	10
04	41	853	12
04	42	865	17
04	43	889	33

Grade 7 Science, Form 5

Form	Raw Score	Scale Score	Conditional SEM
05	0	700	34
05	1	731	17
05	2	744	13
05	3	752	11
05	4	758	9
05	5	763	9
05	6	767	8
05	7	771	8
05	8	774	7
05	9	777	7
05	10	780	7
05	11	782	7
05	12	785	6
05	13	787	6
05	14	789	6
05	15	792	6
05	16	794	6
05	17	796	6
05	18	798	6
05	19	800	6
05	20	802	6
05	21	804	6
05	22	806	6
05	23	808	6
05	24	809	6
05	25	811	6
05	26	813	6
05	27	815	6
05	28	817	6
05	29	819	6
05	30	821	6
05	31	823	6
05	32	826	6
05	33	828	6
05	34	831	7
05	35	833	7
05	36	836	7
05	37	840	8
05	38	844	8
05	39	848	9
05	40	854	10
05	41	861	12
05	42	874	17
05	43	898	34

Grade 7 Science, Form 6

Form	Raw Score	Scale Score	Conditional SEM
06	0	700	34
06	1	737	17
06	2	749	12
06	3	757	10
06	4	762	9
06	5	767	8
06	6	770	8
06	7	774	7
06	8	777	7
06	9	779	7
06	10	782	6
06	11	784	6
06	12	787	6
06	13	789	6
06	14	791	6
06	15	793	6
06	16	795	6
06	17	797	6
06	18	799	6
06	19	801	6
06	20	803	6
06	21	806	6
06	22	808	6
06	23	810	6
06	24	812	6
06	25	814	6
06	26	816	6
06	27	818	6
06	28	821	6
06	29	823	6
06	30	826	6
06	31	828	7
06	32	831	7
06	33	834	7
06	34	837	7
06	35	840	8
06	36	844	8
06	37	848	9
06	38	853	10
06	39	859	11
06	40	867	13
06	41	880	17
06	42	900	34

Grade 7 Science, Form 7

Form	Raw Score	Scale Score	Conditional SEM
07	0	700	34
07	1	731	17
07	2	743	12
07	3	751	10
07	4	756	9
07	5	761	8
07	6	765	8
07	7	768	7
07	8	771	7
07	9	774	7
07	10	777	7
07	11	779	6
07	12	782	6
07	13	784	6
07	14	786	6
07	15	789	6
07	16	791	6
07	17	793	6
07	18	795	6
07	19	797	6
07	20	799	6
07	21	801	6
07	22	803	6
07	23	805	6
07	24	807	6
07	25	809	6
07	26	811	6
07	27	813	6
07	28	815	6
07	29	818	6
07	30	820	6
07	31	822	6
07	32	824	6
07	33	827	7
07	34	830	7
07	35	832	7
07	36	835	7
07	37	839	8
07	38	843	8
07	39	847	9
07	40	853	11
07	41	861	13
07	42	875	18
07	43	899	34

Grade 7 Science, Form 8

Form	Raw Score	Scale Score	Conditional SEM
08	0	700	34
08	1	731	17
08	2	744	12
08	3	751	10
08	4	757	9
08	5	762	8
08	6	765	8
08	7	769	7
08	8	772	7
08	9	775	7
08	10	778	7
08	11	780	6
08	12	783	6
08	13	785	6
08	14	787	6
08	15	790	6
08	16	792	6
08	17	794	6
08	18	796	6
08	19	799	6
08	20	801	6
08	21	803	6
08	22	805	6
08	23	808	6
08	24	810	6
08	25	812	6
08	26	814	6
08	27	817	6
08	28	819	6
08	29	822	7
08	30	824	7
08	31	827	7
08	32	830	7
08	33	833	7
08	34	836	8
08	35	840	8
08	36	844	9
08	37	849	9
08	38	855	11
08	39	863	13
08	40	877	18
08	41	900	34

Grade 7 Science, Form 9

Form	Raw Score	Scale Score	Conditional SEM
09	0	700	34
09	1	725	17
09	2	737	12
09	3	745	10
09	4	751	9
09	5	755	8
09	6	759	8
09	7	763	7
09	8	766	7
09	9	769	7
09	10	772	7
09	11	774	6
09	12	777	6
09	13	779	6
09	14	781	6
09	15	784	6
09	16	786	6
09	17	788	6
09	18	790	6
09	19	792	6
09	20	794	6
09	21	796	6
09	22	798	6
09	23	800	6
09	24	802	6
09	25	805	6
09	26	807	6
09	27	809	6
09	28	811	6
09	29	813	6
09	30	816	6
09	31	818	6
09	32	821	7
09	33	823	7
09	34	826	7
09	35	829	7
09	36	832	8
09	37	836	8
09	38	840	9
09	39	845	9
09	40	851	11
09	41	860	13
09	42	873	18
09	43	898	34

Grade 7 Science, Form 10

Form	Raw Score	Scale Score	Conditional SEM
10	0	700	34
10	1	730	17
10	2	743	13
10	3	751	11
10	4	757	9
10	5	762	9
10	6	766	8
10	7	770	8
10	8	773	7
10	9	777	7
10	10	780	7
10	11	782	7
10	12	785	7
10	13	787	6
10	14	790	6
10	15	792	6
10	16	794	6
10	17	796	6
10	18	799	6
10	19	801	6
10	20	803	6
10	21	805	6
10	22	807	6
10	23	809	6
10	24	811	6
10	25	813	6
10	26	815	6
10	27	817	6
10	28	819	6
10	29	821	6
10	30	823	6
10	31	826	6
10	32	828	6
10	33	830	7
10	34	833	7
10	35	836	7
10	36	839	7
10	37	843	8
10	38	847	9
10	39	852	9
10	40	857	11
10	41	866	13
10	42	879	17
10	43	900	34

Grade 7 Science, Form 11

Form	Raw Score	Scale Score	Conditional SEM
11	0	700	34
11	1	731	17
11	2	744	12
11	3	752	10
11	4	757	9
11	5	762	8
11	6	766	8
11	7	769	7
11	8	772	7
11	9	775	7
11	10	778	6
11	11	780	6
11	12	782	6
11	13	785	6
11	14	787	6
11	15	789	6
11	16	791	6
11	17	793	6
11	18	795	6
11	19	797	6
11	20	799	6
11	21	801	6
11	22	803	6
11	23	805	6
11	24	807	6
11	25	809	6
11	26	812	6
11	27	814	6
11	28	816	6
11	29	819	6
11	30	821	7
11	31	824	7
11	32	827	7
11	33	830	7
11	34	833	7
11	35	836	8
11	36	840	8
11	37	844	9
11	38	849	9
11	39	855	10
11	40	862	12
11	41	872	14
11	42	887	18
11	43	900	34

Grade 7 Science, Form 12

Form	Raw Score	Scale Score	Conditional SEM
12	0	700	34
12	1	730	17
12	2	742	12
12	3	750	10
12	4	755	9
12	5	760	8
12	6	764	8
12	7	767	7
12	8	770	7
12	9	773	7
12	10	776	7
12	11	778	6
12	12	781	6
12	13	783	6
12	14	785	6
12	15	788	6
12	16	790	6
12	17	792	6
12	18	794	6
12	19	796	6
12	20	798	6
12	21	800	6
12	22	802	6
12	23	804	6
12	24	807	6
12	25	809	6
12	26	811	6
12	27	813	6
12	28	815	6
12	29	818	6
12	30	820	6
12	31	822	7
12	32	825	7
12	33	828	7
12	34	831	7
12	35	834	8
12	36	838	8
12	37	842	9
12	38	847	9
12	39	853	11
12	40	861	13
12	41	874	18
12	42	899	34

Grade 7 Science, Form 13

Form	Raw Score	Scale Score	Conditional SEM
13	0	700	33
13	1	736	17
13	2	748	12
13	3	755	10
13	4	761	9
13	5	765	8
13	6	769	8
13	7	772	7
13	8	775	7
13	9	778	7
13	10	780	6
13	11	783	6
13	12	785	6
13	13	787	6
13	14	790	6
13	15	792	6
13	16	794	6
13	17	796	6
13	18	798	6
13	19	800	6
13	20	802	6
13	21	804	6
13	22	806	6
13	23	808	6
13	24	810	6
13	25	813	6
13	26	815	6
13	27	817	6
13	28	820	6
13	29	822	6
13	30	825	7
13	31	827	7
13	32	830	7
13	33	833	7
13	34	836	8
13	35	840	8
13	36	844	9
13	37	849	10
13	38	855	11
13	39	864	13
13	40	877	17
13	41	900	34

Grade 7 Science, Form 14

Form	Raw Score	Scale Score	Conditional SEM
14	0	700	34
14	1	729	17
14	2	741	12
14	3	749	10
14	4	754	9
14	5	759	8
14	6	763	8
14	7	766	7
14	8	769	7
14	9	772	7
14	10	775	7
14	11	778	6
14	12	780	6
14	13	782	6
14	14	784	6
14	15	787	6
14	16	789	6
14	17	791	6
14	18	793	6
14	19	795	6
14	20	797	6
14	21	799	6
14	22	801	6
14	23	803	6
14	24	805	6
14	25	807	6
14	26	809	6
14	27	811	6
14	28	813	6
14	29	815	6
14	30	817	6
14	31	819	6
14	32	822	6
14	33	824	7
14	34	827	7
14	35	830	7
14	36	833	8
14	37	837	8
14	38	841	9
14	39	846	9
14	40	852	11
14	41	860	13
14	42	873	18
14	43	898	34

Grade 7 Science, Form 15

Form	Raw Score	Scale Score	Conditional SEM
15	0	700	34
15	1	731	17
15	2	743	13
15	3	751	11
15	4	757	9
15	5	762	9
15	6	766	8
15	7	770	8
15	8	774	7
15	9	777	7
15	10	779	7
15	11	782	7
15	12	785	6
15	13	787	6
15	14	789	6
15	15	792	6
15	16	794	6
15	17	796	6
15	18	798	6
15	19	800	6
15	20	802	6
15	21	804	6
15	22	806	6
15	23	808	6
15	24	810	6
15	25	812	6
15	26	814	6
15	27	816	6
15	28	818	6
15	29	820	6
15	30	823	6
15	31	825	6
15	32	827	6
15	33	830	7
15	34	833	7
15	35	835	7
15	36	839	7
15	37	842	8
15	38	846	9
15	39	851	9
15	40	857	11
15	41	865	13
15	42	878	17
15	43	900	34

Grade 7 Science, Paper Form

Raw Score	Scale Score	Conditional SEM
0	700	34
1	732	17
2	744	12
3	752	10
4	758	9
5	762	8
6	766	8
7	770	7
8	773	7
9	775	7
10	778	7
11	781	6
12	783	6
13	785	6
14	787	6
15	790	6
16	792	6
17	794	6
18	796	6
19	798	6
20	800	6
21	802	6
22	804	6
23	806	6
24	808	6
25	810	6
26	812	6
27	814	6
28	816	6
29	818	6
30	821	6
31	823	7
32	826	7
33	829	7
34	832	8
35	836	8
36	840	9
37	845	10
38	852	11
39	861	14
40	878	20
41	900	35

Grade 7 Science, Braille Form

Raw Score	Scale Score	Conditional SEM
0	700	34
1	742	17
2	755	13
3	763	11
4	769	10
5	774	9
6	778	8
7	782	8
8	786	8
9	789	7
10	792	7
11	795	7
12	798	7
13	801	7
14	803	7
15	806	6
16	808	6
17	811	6
18	813	6
19	815	6
20	818	6
21	820	6
22	823	7
23	826	7
24	828	7
25	831	7
26	834	7
27	838	8
28	842	8
29	847	9
30	852	11
31	861	13
32	874	18
33	899	34

Grade 11 Science, Form 1

Form	Raw Score	Scale Score	Conditional SEM
01	0	700	34
01	1	732	17
01	2	744	12
01	3	752	10
01	4	758	9
01	5	762	8
01	6	766	8
01	7	770	7
01	8	773	7
01	9	776	7
01	10	778	7
01	11	781	6
01	12	783	6
01	13	786	6
01	14	788	6
01	15	790	6
01	16	792	6
01	17	794	6
01	18	796	6
01	19	798	6
01	20	800	6
01	21	802	6
01	22	804	6
01	23	806	6
01	24	808	6
01	25	810	6
01	26	812	6
01	27	814	6
01	28	816	6
01	29	818	6
01	30	820	6
01	31	822	6
01	32	825	6
01	33	827	7
01	34	830	7
01	35	833	7
01	36	836	8
01	37	840	8
01	38	844	9
01	39	849	9
01	40	855	11
01	41	863	13
01	42	876	17
01	43	900	34

Grade 11 Science, Form 2

Form	Raw Score	Scale Score	Conditional SEM
02	0	700	34
02	1	729	17
02	2	742	13
02	3	750	11
02	4	756	10
02	5	761	9
02	6	765	8
02	7	769	8
02	8	772	7
02	9	775	7
02	10	778	7
02	11	780	6
02	12	783	6
02	13	785	6
02	14	787	6
02	15	790	6
02	16	792	6
02	17	794	6
02	18	796	6
02	19	798	6
02	20	800	6
02	21	802	6
02	22	804	6
02	23	806	6
02	24	808	6
02	25	810	6
02	26	812	6
02	27	814	6
02	28	816	6
02	29	818	6
02	30	821	6
02	31	823	6
02	32	826	7
02	33	828	7
02	34	831	7
02	35	835	8
02	36	838	8
02	37	842	9
02	38	847	9
02	39	853	11
02	40	861	13
02	41	874	17
02	42	899	34

Grade 11 Science, Form 3

Form	Raw Score	Scale Score	Conditional SEM
03	0	700	34
03	1	735	17
03	2	747	12
03	3	754	10
03	4	760	9
03	5	764	8
03	6	768	8
03	7	772	7
03	8	775	7
03	9	777	7
03	10	780	7
03	11	783	6
03	12	785	6
03	13	787	6
03	14	790	6
03	15	792	6
03	16	794	6
03	17	796	6
03	18	798	6
03	19	800	6
03	20	802	6
03	21	804	6
03	22	806	6
03	23	808	6
03	24	810	6
03	25	812	6
03	26	814	6
03	27	816	6
03	28	819	6
03	29	821	6
03	30	823	6
03	31	825	6
03	32	828	6
03	33	830	7
03	34	833	7
03	35	836	7
03	36	839	7
03	37	843	8
03	38	847	8
03	39	852	9
03	40	857	11
03	41	865	13
03	42	878	17
03	43	900	34

Grade 11 Science, Form 4

Form	Raw Score	Scale Score	Conditional SEM
04	0	700	34
04	1	726	17
04	2	738	13
04	3	747	11
04	4	753	9
04	5	757	9
04	6	762	8
04	7	765	8
04	8	769	7
04	9	772	7
04	10	775	7
04	11	777	7
04	12	780	6
04	13	782	6
04	14	785	6
04	15	787	6
04	16	789	6
04	17	791	6
04	18	793	6
04	19	795	6
04	20	797	6
04	21	799	6
04	22	801	6
04	23	803	6
04	24	805	6
04	25	808	6
04	26	810	6
04	27	812	6
04	28	814	6
04	29	816	6
04	30	819	6
04	31	821	6
04	32	823	7
04	33	826	7
04	34	829	7
04	35	832	7
04	36	835	8
04	37	839	8
04	38	843	9
04	39	848	9
04	40	854	11
04	41	862	13
04	42	875	17
04	43	899	34

Grade 11 Science, Form 5

Form	Raw Score	Scale Score	Conditional SEM
05	0	700	34
05	1	733	17
05	2	745	13
05	3	753	10
05	4	759	9
05	5	764	8
05	6	768	8
05	7	771	7
05	8	774	7
05	9	777	7
05	10	780	7
05	11	783	6
05	12	785	6
05	13	787	6
05	14	790	6
05	15	792	6
05	16	794	6
05	17	796	6
05	18	798	6
05	19	800	6
05	20	802	6
05	21	804	6
05	22	806	6
05	23	808	6
05	24	810	6
05	25	812	6
05	26	814	6
05	27	817	6
05	28	819	6
05	29	821	6
05	30	823	6
05	31	826	6
05	32	828	7
05	33	831	7
05	34	834	7
05	35	837	7
05	36	840	8
05	37	844	8
05	38	848	9
05	39	853	9
05	40	859	11
05	41	867	13
05	42	879	17
05	43	900	34

Grade 11 Science, Form 6

Form	Raw Score	Scale Score	Conditional SEM
06	0	700	34
06	1	732	17
06	2	744	12
06	3	752	10
06	4	758	9
06	5	762	8
06	6	766	8
06	7	770	8
06	8	773	7
06	9	776	7
06	10	779	7
06	11	781	7
06	12	784	6
06	13	786	6
06	14	789	6
06	15	791	6
06	16	793	6
06	17	795	6
06	18	798	6
06	19	800	6
06	20	802	6
06	21	804	6
06	22	806	6
06	23	808	6
06	24	810	6
06	25	812	6
06	26	815	6
06	27	817	6
06	28	819	6
06	29	821	6
06	30	824	6
06	31	826	6
06	32	829	7
06	33	832	7
06	34	834	7
06	35	838	7
06	36	841	8
06	37	845	8
06	38	849	9
06	39	855	10
06	40	862	12
06	41	874	17
06	42	898	33

Grade 11 Science, Form 7

Form	Raw Score	Scale Score	Conditional SEM
07	0	700	34
07	1	724	17
07	2	737	13
07	3	746	11
07	4	752	10
07	5	757	9
07	6	761	8
07	7	765	8
07	8	768	7
07	9	771	7
07	10	774	7
07	11	777	7
07	12	780	7
07	13	782	6
07	14	785	6
07	15	787	6
07	16	789	6
07	17	791	6
07	18	794	6
07	19	796	6
07	20	798	6
07	21	800	6
07	22	802	6
07	23	804	6
07	24	806	6
07	25	808	6
07	26	810	6
07	27	812	6
07	28	815	6
07	29	817	6
07	30	819	6
07	31	822	6
07	32	824	7
07	33	827	7
07	34	829	7
07	35	832	7
07	36	836	7
07	37	839	8
07	38	843	8
07	39	848	9
07	40	853	10
07	41	861	12
07	42	873	17
07	43	896	33

Grade 11 Science, Form 8

Form	Raw Score	Scale Score	Conditional SEM
08	0	700	34
08	1	728	17
08	2	741	12
08	3	748	10
08	4	754	9
08	5	759	8
08	6	763	8
08	7	766	7
08	8	770	7
08	9	773	7
08	10	775	7
08	11	778	6
08	12	780	6
08	13	783	6
08	14	785	6
08	15	787	6
08	16	789	6
08	17	792	6
08	18	794	6
08	19	796	6
08	20	798	6
08	21	800	6
08	22	802	6
08	23	804	6
08	24	806	6
08	25	808	6
08	26	810	6
08	27	813	6
08	28	815	6
08	29	817	6
08	30	820	6
08	31	822	7
08	32	825	7
08	33	828	7
08	34	831	7
08	35	834	7
08	36	837	8
08	37	841	8
08	38	845	9
08	39	850	9
08	40	855	10
08	41	863	12
08	42	875	17
08	43	899	33

Grade 11 Science, Form 9

Form	Raw Score	Scale Score	Conditional SEM
09	0	700	34
09	1	727	17
09	2	740	13
09	3	748	11
09	4	754	9
09	5	759	9
09	6	763	8
09	7	766	8
09	8	769	7
09	9	772	7
09	10	775	7
09	11	778	6
09	12	780	6
09	13	783	6
09	14	785	6
09	15	787	6
09	16	789	6
09	17	791	6
09	18	793	6
09	19	795	6
09	20	798	6
09	21	800	6
09	22	802	6
09	23	804	6
09	24	806	6
09	25	808	6
09	26	810	6
09	27	813	6
09	28	815	6
09	29	817	6
09	30	820	7
09	31	822	7
09	32	825	7
09	33	828	7
09	34	831	7
09	35	835	8
09	36	838	8
09	37	843	9
09	38	847	9
09	39	853	10
09	40	861	12
09	41	873	17
09	42	897	33

Grade 11 Science, Form 10

Form	Raw Score	Scale Score	Conditional SEM
10	0	700	34
10	1	728	17
10	2	740	12
10	3	748	10
10	4	754	9
10	5	759	8
10	6	763	8
10	7	766	7
10	8	769	7
10	9	772	7
10	10	775	7
10	11	778	6
10	12	780	6
10	13	782	6
10	14	785	6
10	15	787	6
10	16	789	6
10	17	791	6
10	18	793	6
10	19	796	6
10	20	798	6
10	21	800	6
10	22	802	6
10	23	804	6
10	24	806	6
10	25	808	6
10	26	810	6
10	27	813	6
10	28	815	6
10	29	817	6
10	30	820	6
10	31	822	7
10	32	825	7
10	33	828	7
10	34	830	7
10	35	833	7
10	36	837	8
10	37	840	8
10	38	844	8
10	39	849	9
10	40	854	10
10	41	862	12
10	42	874	17
10	43	897	33

Grade 11 Science, Form 11

Form	Raw Score	Scale Score	Conditional SEM
11	0	700	34
11	1	728	17
11	2	740	12
11	3	748	10
11	4	753	9
11	5	758	8
11	6	762	8
11	7	766	7
11	8	769	7
11	9	772	7
11	10	774	7
11	11	777	6
11	12	779	6
11	13	782	6
11	14	784	6
11	15	786	6
11	16	788	6
11	17	790	6
11	18	793	6
11	19	795	6
11	20	797	6
11	21	799	6
11	22	801	6
11	23	803	6
11	24	805	6
11	25	807	6
11	26	809	6
11	27	812	6
11	28	814	6
11	29	816	6
11	30	819	7
11	31	822	7
11	32	824	7
11	33	827	7
11	34	831	8
11	35	834	8
11	36	838	9
11	37	843	9
11	38	849	10
11	39	856	12
11	40	865	13
11	41	879	18
11	42	900	33

Grade 11 Science, Form 12

Form	Raw Score	Scale Score	Conditional SEM
12	0	700	34
12	1	729	17
12	2	742	12
12	3	749	10
12	4	755	9
12	5	760	8
12	6	764	8
12	7	767	7
12	8	770	7
12	9	773	7
12	10	776	7
12	11	778	6
12	12	781	6
12	13	783	6
12	14	785	6
12	15	787	6
12	16	790	6
12	17	792	6
12	18	794	6
12	19	796	6
12	20	798	6
12	21	800	6
12	22	802	6
12	23	804	6
12	24	806	6
12	25	808	6
12	26	810	6
12	27	812	6
12	28	814	6
12	29	817	6
12	30	819	7
12	31	822	7
12	32	825	7
12	33	828	7
12	34	831	8
12	35	835	8
12	36	839	9
12	37	844	9
12	38	850	10
12	39	857	12
12	40	866	13
12	41	880	18
12	42	900	33

Grade 11 Science, Form 13

Form	Raw Score	Scale Score	Conditional SEM
13	0	700	34
13	1	729	17
13	2	741	12
13	3	749	10
13	4	755	9
13	5	759	8
13	6	763	8
13	7	766	7
13	8	769	7
13	9	772	7
13	10	774	6
13	11	777	6
13	12	779	6
13	13	782	6
13	14	784	6
13	15	786	6
13	16	788	6
13	17	790	6
13	18	792	6
13	19	794	6
13	20	796	6
13	21	799	6
13	22	801	6
13	23	803	6
13	24	805	6
13	25	807	6
13	26	809	6
13	27	811	6
13	28	814	6
13	29	816	6
13	30	819	6
13	31	821	7
13	32	824	7
13	33	827	7
13	34	830	7
13	35	833	8
13	36	837	8
13	37	841	9
13	38	846	9
13	39	852	10
13	40	859	11
13	41	868	13
13	42	881	17
13	43	900	33

Grade 11 Science, Form 14

Form	Raw Score	Scale Score	Conditional SEM
14	0	700	34
14	1	726	17
14	2	739	12
14	3	747	10
14	4	752	9
14	5	757	8
14	6	761	8
14	7	765	8
14	8	768	7
14	9	771	7
14	10	774	7
14	11	776	7
14	12	779	6
14	13	781	6
14	14	784	6
14	15	786	6
14	16	788	6
14	17	790	6
14	18	792	6
14	19	795	6
14	20	797	6
14	21	799	6
14	22	801	6
14	23	803	6
14	24	805	6
14	25	807	6
14	26	810	6
14	27	812	6
14	28	814	6
14	29	817	7
14	30	820	7
14	31	822	7
14	32	825	7
14	33	829	7
14	34	832	8
14	35	836	8
14	36	840	9
14	37	845	9
14	38	851	10
14	39	858	12
14	40	867	13
14	41	881	17
14	42	900	33

Grade 11 Science, Form 15

Form	Raw Score	Scale Score	Conditional SEM
15	0	700	34
15	1	729	17
15	2	741	12
15	3	749	10
15	4	755	9
15	5	760	8
15	6	764	8
15	7	767	7
15	8	770	7
15	9	773	7
15	10	776	7
15	11	779	6
15	12	781	6
15	13	783	6
15	14	786	6
15	15	788	6
15	16	790	6
15	17	792	6
15	18	794	6
15	19	796	6
15	20	798	6
15	21	800	6
15	22	802	6
15	23	805	6
15	24	807	6
15	25	809	6
15	26	811	6
15	27	813	6
15	28	815	6
15	29	818	6
15	30	820	6
15	31	823	7
15	32	826	7
15	33	828	7
15	34	831	7
15	35	835	8
15	36	838	8
15	37	843	9
15	38	847	9
15	39	853	10
15	40	860	11
15	41	869	13
15	42	882	17
15	43	900	33

Grade 11 Science, Paper Form

Raw Score	Scale Score	Conditional SEM
0	700	34
1	733	17
2	746	12
3	753	10
4	759	9
5	763	8
6	767	8
7	770	7
8	773	7
9	776	7
10	779	7
11	781	6
12	784	6
13	786	6
14	788	6
15	790	6
16	792	6
17	795	6
18	797	6
19	799	6
20	801	6
21	803	6
22	805	6
23	807	6
24	809	6
25	811	6
26	813	6
27	815	6
28	818	6
29	820	6
30	823	6
31	825	7
32	828	7
33	831	7
34	834	8
35	838	8
36	842	9
37	847	9
38	853	11
39	861	13
40	874	17
41	899	34

Grade 11 Science, Braille Form

Raw Score	Scale Score	Conditional SEM
0	700	34
1	739	17
2	752	13
3	760	11
4	766	9
5	771	9
6	775	8
7	779	8
8	782	7
9	786	7
10	789	7
11	792	7
12	795	7
13	797	7
14	800	7
15	803	7
16	806	7
17	809	7
18	812	7
19	815	7
20	819	8
21	822	8
22	826	8
23	831	9
24	836	10
25	842	10
26	848	11
27	857	12
28	867	14
29	881	18
30	900	34

Grade 5 Social Studies, Forms 1 & 2

Form	Raw Score	Scale Score	Conditional SEM
01 - 02	0	400	34
01 - 02	1	442	17
01 - 02	2	454	12
01 - 02	3	462	10
01 - 02	4	468	9
01 - 02	5	472	8
01 - 02	6	476	8
01 - 02	7	479	7
01 - 02	8	482	7
01 - 02	9	485	7
01 - 02	10	488	6
01 - 02	11	490	6
01 - 02	12	492	6
01 - 02	13	495	6
01 - 02	14	497	6
01 - 02	15	499	6
01 - 02	16	501	6
01 - 02	17	503	6
01 - 02	18	505	6
01 - 02	19	507	6
01 - 02	20	508	6
01 - 02	21	510	6
01 - 02	22	512	6
01 - 02	23	514	6
01 - 02	24	516	6
01 - 02	25	518	6
01 - 02	26	520	6
01 - 02	27	522	6
01 - 02	28	525	6
01 - 02	29	527	6
01 - 02	30	530	7
01 - 02	31	532	7
01 - 02	32	535	7
01 - 02	33	539	8
01 - 02	34	542	8
01 - 02	35	547	9
01 - 02	36	552	10
01 - 02	37	559	12
01 - 02	38	569	14
01 - 02	39	586	19
01 - 02	40	600	35

Grade 5 Social Studies, Forms 3 & 4

Form	Raw Score	Scale Score	Conditional SEM
03 - 04	0	400	34
03 - 04	1	440	17
03 - 04	2	453	12
03 - 04	3	460	10
03 - 04	4	466	9
03 - 04	5	471	8
03 - 04	6	475	8
03 - 04	7	478	7
03 - 04	8	481	7
03 - 04	9	484	7
03 - 04	10	487	7
03 - 04	11	490	6
03 - 04	12	492	6
03 - 04	13	494	6
03 - 04	14	497	6
03 - 04	15	499	6
03 - 04	16	501	6
03 - 04	17	503	6
03 - 04	18	505	6
03 - 04	19	507	6
03 - 04	20	509	6
03 - 04	21	511	6
03 - 04	22	513	6
03 - 04	23	515	6
03 - 04	24	517	6
03 - 04	25	519	6
03 - 04	26	521	6
03 - 04	27	523	6
03 - 04	28	526	6
03 - 04	29	528	6
03 - 04	30	531	7
03 - 04	31	533	7
03 - 04	32	536	7
03 - 04	33	540	8
03 - 04	34	543	8
03 - 04	35	548	9
03 - 04	36	553	10
03 - 04	37	559	11
03 - 04	38	568	13
03 - 04	39	581	18
03 - 04	40	600	34

Grade 5 Social Studies, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	443	17
2	455	12
3	463	10
4	469	9
5	474	8
6	477	8
7	481	7
8	484	7
9	487	7
10	490	7
11	492	6
12	494	6
13	497	6
14	499	6
15	501	6
16	503	6
17	505	6
18	507	6
19	509	6
20	511	6
21	513	6
22	515	6
23	517	6
24	519	6
25	522	6
26	524	6
27	526	6
28	529	7
29	532	7
30	535	7
31	538	8
32	542	8
33	546	9
34	552	10
35	559	12
36	569	14
37	585	19
38	600	35

Grade 8 Social Studies, Forms 1 & 2

Form	Raw Score	Scale Score	Conditional SEM
01 - 02	0	400	34
01 - 02	1	444	17
01 - 02	2	456	12
01 - 02	3	464	10
01 - 02	4	469	9
01 - 02	5	474	8
01 - 02	6	477	8
01 - 02	7	481	7
01 - 02	8	484	7
01 - 02	9	486	7
01 - 02	10	489	6
01 - 02	11	491	6
01 - 02	12	493	6
01 - 02	13	495	6
01 - 02	14	498	6
01 - 02	15	499	6
01 - 02	16	501	6
01 - 02	17	503	6
01 - 02	18	505	6
01 - 02	19	507	6
01 - 02	20	509	6
01 - 02	21	511	6
01 - 02	22	512	6
01 - 02	23	514	6
01 - 02	24	516	6
01 - 02	25	518	6
01 - 02	26	520	6
01 - 02	27	522	6
01 - 02	28	524	6
01 - 02	29	527	6
01 - 02	30	529	6
01 - 02	31	531	7
01 - 02	32	534	7
01 - 02	33	537	7
01 - 02	34	540	8
01 - 02	35	544	8
01 - 02	36	549	9
01 - 02	37	554	10
01 - 02	38	562	12
01 - 02	39	574	17
01 - 02	40	597	34

Grade 8 Social Studies, Forms 3 & 4

Form	Raw Score	Scale Score	Conditional SEM
03 - 04	0	400	34
03 - 04	1	442	17
03 - 04	2	454	12
03 - 04	3	461	10
03 - 04	4	467	9
03 - 04	5	471	8
03 - 04	6	475	8
03 - 04	7	478	7
03 - 04	8	481	7
03 - 04	9	483	6
03 - 04	10	486	6
03 - 04	11	488	6
03 - 04	12	490	6
03 - 04	13	492	6
03 - 04	14	494	6
03 - 04	15	496	6
03 - 04	16	498	5
03 - 04	17	499	5
03 - 04	18	501	5
03 - 04	19	503	5
03 - 04	20	505	5
03 - 04	21	506	5
03 - 04	22	508	5
03 - 04	23	510	6
03 - 04	24	512	6
03 - 04	25	514	6
03 - 04	26	516	6
03 - 04	27	518	6
03 - 04	28	520	6
03 - 04	29	522	6
03 - 04	30	525	6
03 - 04	31	527	7
03 - 04	32	530	7
03 - 04	33	533	7
03 - 04	34	537	8
03 - 04	35	540	8
03 - 04	36	545	9
03 - 04	37	551	11
03 - 04	38	559	13
03 - 04	39	572	17
03 - 04	40	596	34

Grade 8 Social Studies, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	445	17
2	457	12
3	464	10
4	470	9
5	474	8
6	478	8
7	481	7
8	484	7
9	487	7
10	490	6
11	492	6
12	494	6
13	496	6
14	498	6
15	500	6
16	502	6
17	504	6
18	506	6
19	508	6
20	510	6
21	512	6
22	514	6
23	516	6
24	518	6
25	520	6
26	522	6
27	524	6
28	526	6
29	528	6
30	531	7
31	534	7
32	537	7
33	540	8
34	544	8
35	548	9
36	554	10
37	561	12
38	574	17
39	597	34

Grade 11 Social Studies, Forms 1 & 2

Form	Raw Score	Scale Score	Conditional SEM
01 - 02	0	400	34
01 - 02	1	441	17
01 - 02	2	453	12
01 - 02	3	461	10
01 - 02	4	466	9
01 - 02	5	471	8
01 - 02	6	475	8
01 - 02	7	478	7
01 - 02	8	481	7
01 - 02	9	483	7
01 - 02	10	486	6
01 - 02	11	488	6
01 - 02	12	490	6
01 - 02	13	493	6
01 - 02	14	495	6
01 - 02	15	497	6
01 - 02	16	499	6
01 - 02	17	500	6
01 - 02	18	502	6
01 - 02	19	504	6
01 - 02	20	506	6
01 - 02	21	508	6
01 - 02	22	510	6
01 - 02	23	512	6
01 - 02	24	514	6
01 - 02	25	516	6
01 - 02	26	518	6
01 - 02	27	520	6
01 - 02	28	522	6
01 - 02	29	524	6
01 - 02	30	527	6
01 - 02	31	529	7
01 - 02	32	532	7
01 - 02	33	535	7
01 - 02	34	539	8
01 - 02	35	542	8
01 - 02	36	547	9
01 - 02	37	552	10
01 - 02	38	560	12
01 - 02	39	572	17
01 - 02	40	596	34

Grade 11 Social Studies, Forms 3 & 4

Form	Raw Score	Scale Score	Conditional SEM
03 - 04	0	400	34
03 - 04	1	436	17
03 - 04	2	449	12
03 - 04	3	457	10
03 - 04	4	462	9
03 - 04	5	467	8
03 - 04	6	471	8
03 - 04	7	474	7
03 - 04	8	477	7
03 - 04	9	480	7
03 - 04	10	483	6
03 - 04	11	485	6
03 - 04	12	488	6
03 - 04	13	490	6
03 - 04	14	492	6
03 - 04	15	494	6
03 - 04	16	496	6
03 - 04	17	498	6
03 - 04	18	500	6
03 - 04	19	502	6
03 - 04	20	503	6
03 - 04	21	505	6
03 - 04	22	507	6
03 - 04	23	509	6
03 - 04	24	511	6
03 - 04	25	513	6
03 - 04	26	515	6
03 - 04	27	517	6
03 - 04	28	520	6
03 - 04	29	522	6
03 - 04	30	524	7
03 - 04	31	527	7
03 - 04	32	530	7
03 - 04	33	533	7
03 - 04	34	537	8
03 - 04	35	541	8
03 - 04	36	545	9
03 - 04	37	551	10
03 - 04	38	558	12
03 - 04	39	571	17
03 - 04	40	594	34

Grade 11 Social Studies, Paper Form

Raw Score	Scale Score	Conditional SEM
0	400	34
1	441	17
2	454	12
3	461	10
4	467	9
5	471	8
6	475	8
7	478	7
8	481	7
9	484	7
10	486	6
11	489	6
12	491	6
13	493	6
14	495	6
15	497	6
16	499	6
17	501	6
18	503	6
19	505	6
20	507	6
21	509	6
22	511	6
23	513	6
24	515	6
25	517	6
26	519	6
27	521	6
28	523	6
29	526	7
30	529	7
31	531	7
32	534	7
33	538	8
34	542	8
35	546	9
36	552	10
37	559	12
38	572	17
39	595	34

**Grade 5 Editing and Mechanics,
Forms 1 – 4**

Form	Raw Score	Scale Score	Conditional SEM
01 - 04	0	400	34
01 - 04	1	442	18
01 - 04	2	456	13
01 - 04	3	464	11
01 - 04	4	470	10
01 - 04	5	475	9
01 - 04	6	480	8
01 - 04	7	483	8
01 - 04	8	487	7
01 - 04	9	490	7
01 - 04	10	493	7
01 - 04	11	496	7
01 - 04	12	498	7
01 - 04	13	501	6
01 - 04	14	503	6
01 - 04	15	506	6
01 - 04	16	508	6
01 - 04	17	510	6
01 - 04	18	513	6
01 - 04	19	515	6
01 - 04	20	518	6
01 - 04	21	520	6
01 - 04	22	522	6
01 - 04	23	525	6
01 - 04	24	527	6
01 - 04	25	530	6
01 - 04	26	532	6
01 - 04	27	535	7
01 - 04	28	537	7
01 - 04	29	540	7
01 - 04	30	543	7
01 - 04	31	547	8
01 - 04	32	551	9
01 - 04	33	556	10
01 - 04	34	563	12
01 - 04	35	574	17
01 - 04	36	597	33

**Grade 5 Editing and Mechanics,
Forms 5 – 8**

Form	Raw Score	Scale Score	Conditional SEM
05 - 08	0	400	34
05 - 08	1	437	17
05 - 08	2	450	13
05 - 08	3	459	11
05 - 08	4	465	10
05 - 08	5	470	9
05 - 08	6	474	8
05 - 08	7	478	8
05 - 08	8	482	8
05 - 08	9	485	7
05 - 08	10	488	7
05 - 08	11	491	7
05 - 08	12	494	7
05 - 08	13	496	7
05 - 08	14	499	7
05 - 08	15	501	6
05 - 08	16	504	6
05 - 08	17	506	6
05 - 08	18	509	6
05 - 08	19	511	6
05 - 08	20	513	6
05 - 08	21	516	6
05 - 08	22	518	6
05 - 08	23	521	6
05 - 08	24	523	6
05 - 08	25	526	6
05 - 08	26	528	7
05 - 08	27	531	7
05 - 08	28	534	7
05 - 08	29	537	7
05 - 08	30	540	7
05 - 08	31	543	8
05 - 08	32	547	9
05 - 08	33	552	10
05 - 08	34	559	12
05 - 08	35	571	17
05 - 08	36	594	33

**Grade 8 Editing and Mechanics,
Forms 1 – 5**

Form	Raw Score	Scale Score	Conditional SEM
01 – 05	0	400	34
01 – 05	1	435	17
01 – 05	2	448	13
01 – 05	3	456	11
01 – 05	4	462	9
01 – 05	5	467	9
01 – 05	6	471	8
01 – 05	7	475	8
01 – 05	8	479	8
01 – 05	9	482	7
01 – 05	10	485	7
01 – 05	11	488	7
01 – 05	12	491	7
01 – 05	13	494	7
01 – 05	14	497	7
01 – 05	15	499	7
01 – 05	16	502	6
01 – 05	17	504	6
01 – 05	18	507	6
01 – 05	19	509	6
01 – 05	20	511	6
01 – 05	21	514	6
01 – 05	22	516	6
01 – 05	23	518	6
01 – 05	24	520	6
01 – 05	25	523	6
01 – 05	26	525	6
01 – 05	27	528	7
01 – 05	28	530	7
01 – 05	29	534	7
01 – 05	30	537	8
01 – 05	31	541	8
01 – 05	32	545	9
01 – 05	33	551	10
01 – 05	34	559	13
01 – 05	35	572	17
01 – 05	36	596	34

**Grade 8 Editing and Mechanics,
Forms 6 – 10**

Form	Raw Score	Scale Score	Conditional SEM
06 – 10	0	400	34
06 – 10	1	437	17
06 – 10	2	450	13
06 – 10	3	458	11
06 – 10	4	464	10
06 – 10	5	469	9
06 – 10	6	474	8
06 – 10	7	478	8
06 – 10	8	481	8
06 – 10	9	485	7
06 – 10	10	488	7
06 – 10	11	491	7
06 – 10	12	494	7
06 – 10	13	497	7
06 – 10	14	500	7
06 – 10	15	502	7
06 – 10	16	505	7
06 – 10	17	507	7
06 – 10	18	510	6
06 – 10	19	512	6
06 – 10	20	515	6
06 – 10	21	517	6
06 – 10	22	520	6
06 – 10	23	522	6
06 – 10	24	525	7
06 – 10	25	527	7
06 – 10	26	530	7
06 – 10	27	533	7
06 – 10	28	536	8
06 – 10	29	540	8
06 – 10	30	545	9
06 – 10	31	550	10
06 – 10	32	558	12
06 – 10	33	570	17
06 – 10	34	594	34

**Grade 11 Editing and Mechanics,
Forms 1 – 4**

Form	Raw Score	Scale Score	Conditional SEM
01 - 04	0	400	34
01 - 04	1	443	17
01 - 04	2	456	13
01 - 04	3	464	11
01 - 04	4	470	9
01 - 04	5	475	9
01 - 04	6	479	8
01 - 04	7	483	8
01 - 04	8	486	8
01 - 04	9	490	7
01 - 04	10	493	7
01 - 04	11	496	7
01 - 04	12	499	7
01 - 04	13	501	7
01 - 04	14	504	7
01 - 04	15	506	7
01 - 04	16	509	6
01 - 04	17	511	6
01 - 04	18	514	6
01 - 04	19	516	6
01 - 04	20	519	6
01 - 04	21	521	6
01 - 04	22	524	6
01 - 04	23	526	6
01 - 04	24	529	6
01 - 04	25	531	7
01 - 04	26	534	7
01 - 04	27	537	7
01 - 04	28	540	7
01 - 04	29	543	7
01 - 04	30	546	8
01 - 04	31	550	8
01 - 04	32	555	9
01 - 04	33	561	10
01 - 04	34	568	12
01 - 04	35	581	17
01 - 04	36	600	34

**Grade 11 Editing and Mechanics,
Form 5 – 8**

Form	Raw Score	Scale Score	Conditional SEM
05 - 08	0	400	34
05 - 08	1	448	17
05 - 08	2	461	13
05 - 08	3	469	11
05 - 08	4	475	9
05 - 08	5	480	9
05 - 08	6	484	8
05 - 08	7	488	8
05 - 08	8	491	7
05 - 08	9	494	7
05 - 08	10	497	7
05 - 08	11	500	7
05 - 08	12	503	7
05 - 08	13	506	7
05 - 08	14	508	6
05 - 08	15	511	6
05 - 08	16	513	6
05 - 08	17	516	6
05 - 08	18	518	6
05 - 08	19	520	6
05 - 08	20	523	6
05 - 08	21	525	6
05 - 08	22	527	6
05 - 08	23	529	6
05 - 08	24	532	6
05 - 08	25	534	6
05 - 08	26	537	7
05 - 08	27	539	7
05 - 08	28	542	7
05 - 08	29	545	7
05 - 08	30	549	8
05 - 08	31	552	8
05 - 08	32	557	9
05 - 08	33	562	10
05 - 08	34	570	12
05 - 08	35	582	17
05 - 08	36	600	34

**Grade 5 On-Demand Writing,
Forms 1 – 3**

Form	Raw Score	Scale Score	Conditional SEM
01 – 03	0	400	.
01 – 03	10	463	10
01 – 03	11	471	6
01 – 03	12	475	4
01 – 03	13	479	4
01 – 03	14	481	4
01 – 03	15	484	4
01 – 03	16	486	4
01 – 03	17	489	4
01 – 03	18	493	5
01 – 03	19	497	4
01 – 03	20	500	4
01 – 03	21	503	3
01 – 03	22	505	3
01 – 03	23	506	3
01 – 03	24	508	3
01 – 03	25	509	3
01 – 03	26	511	3
01 – 03	27	513	3
01 – 03	28	515	3
01 – 03	29	517	4
01 – 03	30	520	4
01 – 03	31	523	4
01 – 03	32	526	4
01 – 03	33	529	4
01 – 03	34	532	4
01 – 03	35	535	4
01 – 03	36	537	4
01 – 03	37	541	4
01 – 03	38	544	5
01 – 03	39	551	6
01 – 03	40	560	11

**Grade 5 On-Demand Writing,
Forms 4 – 6**

Form	Raw Score	Scale Score	Conditional SEM
04 – 06	0	400	.
04 – 06	10	462	10
04 – 06	11	470	6
04 – 06	12	476	5
04 – 06	13	479	4
04 – 06	14	483	4
04 – 06	15	485	4
04 – 06	16	488	4
04 – 06	17	491	4
04 – 06	18	495	4
04 – 06	19	498	4
04 – 06	20	501	4
04 – 06	21	504	4
04 – 06	22	506	3
04 – 06	23	508	3
04 – 06	24	510	3
04 – 06	25	512	3
04 – 06	26	515	3
04 – 06	27	517	3
04 – 06	28	519	4
04 – 06	29	522	4
04 – 06	30	525	4
04 – 06	31	528	4
04 – 06	32	531	4
04 – 06	33	534	4
04 – 06	34	537	4
04 – 06	35	541	4
04 – 06	36	544	4
04 – 06	37	548	4
04 – 06	38	552	5
04 – 06	39	557	6
04 – 06	40	565	10

**Grade 5 On-Demand Writing,
Forms 7 – 9**

Form	Raw Score	Scale Score	Conditional SEM
07 – 09	0	400	.
07 – 09	10	452	11
07 – 09	11	461	6
07 – 09	12	467	5
07 – 09	13	472	4
07 – 09	14	475	4
07 – 09	15	478	4
07 – 09	16	481	4
07 – 09	17	485	4
07 – 09	18	488	4
07 – 09	19	492	4
07 – 09	20	495	4
07 – 09	21	498	4
07 – 09	22	501	3
07 – 09	23	503	3
07 – 09	24	505	3
07 – 09	25	507	3
07 – 09	26	509	3
07 – 09	27	512	4
07 – 09	28	515	4
07 – 09	29	518	4
07 – 09	30	523	5
07 – 09	31	527	4
07 – 09	32	530	4
07 – 09	33	534	4
07 – 09	34	538	4
07 – 09	35	542	4
07 – 09	36	546	4
07 – 09	37	550	4
07 – 09	38	554	5
07 – 09	39	559	6
07 – 09	40	568	11

**Grade 5 On-Demand Writing,
Forms 10 – 12**

Form	Raw Score	Scale Score	Conditional SEM
10 – 12	0	400	.
10 – 12	10	458	10
10 – 12	11	464	5
10 – 12	12	468	4
10 – 12	13	470	3
10 – 12	14	472	3
10 – 12	15	474	3
10 – 12	16	477	4
10 – 12	17	479	4
10 – 12	18	483	5
10 – 12	19	488	5
10 – 12	20	492	4
10 – 12	21	495	4
10 – 12	22	497	3
10 – 12	23	499	3
10 – 12	24	501	3
10 – 12	25	503	3
10 – 12	26	505	3
10 – 12	27	508	3
10 – 12	28	510	4
10 – 12	29	513	4
10 – 12	30	515	4
10 – 12	31	518	4
10 – 12	32	521	4
10 – 12	33	524	4
10 – 12	34	528	4
10 – 12	35	532	4
10 – 12	36	535	4
10 – 12	37	539	5
10 – 12	38	544	5
10 – 12	39	551	7
10 – 12	40	561	11

**Grade 8 On-Demand Writing,
Forms 1 – 3**

Form	Raw Score	Scale Score	Conditional SEM
01 – 03	0	400	.
01 – 03	12	451	11
01 – 03	13	461	6
01 – 03	14	467	5
01 – 03	15	471	4
01 – 03	16	474	4
01 – 03	17	477	4
01 – 03	18	480	4
01 – 03	19	482	4
01 – 03	20	485	4
01 – 03	21	488	4
01 – 03	22	491	4
01 – 03	23	495	4
01 – 03	24	498	4
01 – 03	25	501	4
01 – 03	26	504	4
01 – 03	27	507	3
01 – 03	28	509	3
01 – 03	29	511	3
01 – 03	30	513	3
01 – 03	31	516	3
01 – 03	32	518	3
01 – 03	33	520	4
01 – 03	34	523	4
01 – 03	35	527	4
01 – 03	36	530	4
01 – 03	37	533	4
01 – 03	38	536	4
01 – 03	39	539	4
01 – 03	40	543	4
01 – 03	41	546	4
01 – 03	42	550	5
01 – 03	43	554	4
01 – 03	44	558	4
01 – 03	45	561	4
01 – 03	46	565	5
01 – 03	47	570	6
01 – 03	48	578	10

**Grade 8 On-Demand Writing,
Forms 4 – 6**

Form	Raw Score	Scale Score	Conditional SEM
04 – 06	0	400	.
04 – 06	12	453	11
04 – 06	13	462	6
04 – 06	14	467	5
04 – 06	15	471	4
04 – 06	16	474	4
04 – 06	17	476	3
04 – 06	18	478	3
04 – 06	19	481	3
04 – 06	20	483	4
04 – 06	21	486	4
04 – 06	22	489	4
04 – 06	23	493	4
04 – 06	24	496	4
04 – 06	25	499	4
04 – 06	26	502	3
04 – 06	27	504	3
04 – 06	28	506	3
04 – 06	29	507	3
04 – 06	30	509	3
04 – 06	31	511	3
04 – 06	32	513	3
04 – 06	33	515	3
04 – 06	34	518	4
04 – 06	35	521	4
04 – 06	36	524	4
04 – 06	37	527	4
04 – 06	38	530	4
04 – 06	39	533	4
04 – 06	40	536	4
04 – 06	41	538	4
04 – 06	42	541	4
04 – 06	43	544	4
04 – 06	44	547	4
04 – 06	45	550	4
04 – 06	46	553	5
04 – 06	47	559	6
04 – 06	48	567	10

**Grade 8 On-Demand Writing,
Forms 7 – 9**

Form	Raw Score	Scale Score	Conditional SEM
07 – 09	0	400	.
07 – 09	12	448	11
07 – 09	13	456	6
07 – 09	14	461	5
07 – 09	15	465	4
07 – 09	16	468	4
07 – 09	17	471	4
07 – 09	18	473	3
07 – 09	19	476	4
07 – 09	20	478	4
07 – 09	21	481	4
07 – 09	22	484	4
07 – 09	23	488	5
07 – 09	24	493	5
07 – 09	25	498	4
07 – 09	26	501	4
07 – 09	27	504	4
07 – 09	28	506	3
07 – 09	29	509	3
07 – 09	30	511	3
07 – 09	31	513	3
07 – 09	32	515	3
07 – 09	33	518	4
07 – 09	34	521	4
07 – 09	35	525	5
07 – 09	36	530	5
07 – 09	37	536	5
07 – 09	38	540	4
07 – 09	39	543	4
07 – 09	40	546	4
07 – 09	41	549	4
07 – 09	42	553	4
07 – 09	43	556	4
07 – 09	44	560	4
07 – 09	45	563	4
07 – 09	46	567	4
07 – 09	47	572	6
07 – 09	48	579	10

**Grade 8 On-Demand Writing,
Forms 10 – 12**

Form	Raw Score	Scale Score	Conditional SEM
10 – 12	0	400	.
10 – 12	12	459	10
10 – 12	13	467	6
10 – 12	14	471	4
10 – 12	15	474	4
10 – 12	16	477	3
10 – 12	17	479	3
10 – 12	18	481	3
10 – 12	19	483	3
10 – 12	20	485	3
10 – 12	21	487	4
10 – 12	22	490	4
10 – 12	23	493	4
10 – 12	24	497	4
10 – 12	25	501	4
10 – 12	26	504	4
10 – 12	27	506	3
10 – 12	28	508	3
10 – 12	29	510	3
10 – 12	30	512	3
10 – 12	31	514	3
10 – 12	32	516	3
10 – 12	33	518	4
10 – 12	34	521	4
10 – 12	35	525	5
10 – 12	36	530	5
10 – 12	37	535	5
10 – 12	38	538	4
10 – 12	39	541	4
10 – 12	40	543	3
10 – 12	41	546	3
10 – 12	42	548	3
10 – 12	43	550	3
10 – 12	44	552	3
10 – 12	45	554	4
10 – 12	46	557	4
10 – 12	47	562	5
10 – 12	48	569	10

**Grade 11 On-Demand Writing,
Forms 1 – 3**

Form	Raw Score	Scale Score	Conditional SEM
01 – 03	0	400	.
01 – 03	12	446	11
01 – 03	13	456	7
01 – 03	14	463	5
01 – 03	15	468	4
01 – 03	16	471	4
01 – 03	17	474	4
01 – 03	18	477	4
01 – 03	19	480	4
01 – 03	20	484	4
01 – 03	21	488	4
01 – 03	22	491	4
01 – 03	23	494	4
01 – 03	24	497	4
01 – 03	25	500	3
01 – 03	26	502	3
01 – 03	27	504	3
01 – 03	28	506	3
01 – 03	29	507	3
01 – 03	30	509	3
01 – 03	31	511	3
01 – 03	32	513	3
01 – 03	33	515	4
01 – 03	34	518	4
01 – 03	35	522	5
01 – 03	36	528	5
01 – 03	37	533	5
01 – 03	38	537	4
01 – 03	39	540	4
01 – 03	40	544	4
01 – 03	41	547	4
01 – 03	42	551	4
01 – 03	43	554	4
01 – 03	44	557	4
01 – 03	45	561	4
01 – 03	46	564	4
01 – 03	47	569	6
01 – 03	48	577	10

**Grade 11 On-Demand Writing,
Forms 4 – 6**

Form	Raw Score	Scale Score	Conditional SEM
04 – 06	0	400	.
04 – 06	12	450	11
04 – 06	13	458	6
04 – 06	14	464	5
04 – 06	15	468	4
04 – 06	16	472	4
04 – 06	17	475	4
04 – 06	18	478	4
04 – 06	19	481	4
04 – 06	20	485	4
04 – 06	21	489	4
04 – 06	22	492	4
04 – 06	23	495	3
04 – 06	24	497	3
04 – 06	25	499	3
04 – 06	26	500	3
04 – 06	27	502	3
04 – 06	28	503	3
04 – 06	29	505	3
04 – 06	30	506	3
04 – 06	31	508	3
04 – 06	32	510	3
04 – 06	33	512	3
04 – 06	34	515	4
04 – 06	35	518	4
04 – 06	36	521	4
04 – 06	37	524	4
04 – 06	38	527	4
04 – 06	39	530	4
04 – 06	40	533	4
04 – 06	41	536	4
04 – 06	42	539	4
04 – 06	43	542	4
04 – 06	44	545	4
04 – 06	45	549	4
04 – 06	46	553	5
04 – 06	47	558	6
04 – 06	48	566	10

**Grade 11 On-Demand Writing,
Forms 7 – 9**

Form	Raw Score	Scale Score	Conditional SEM
07 – 09	0	400	.
07 – 09	12	449	11
07 – 09	13	459	7
07 – 09	14	466	5
07 – 09	15	471	4
07 – 09	16	474	4
07 – 09	17	477	4
07 – 09	18	481	4
07 – 09	19	484	4
07 – 09	20	488	4
07 – 09	21	492	4
07 – 09	22	495	4
07 – 09	23	498	3
07 – 09	24	500	3
07 – 09	25	502	3
07 – 09	26	503	3
07 – 09	27	505	3
07 – 09	28	506	3
07 – 09	29	508	3
07 – 09	30	509	3
07 – 09	31	511	3
07 – 09	32	513	3
07 – 09	33	515	3
07 – 09	34	518	4
07 – 09	35	520	4
07 – 09	36	524	4
07 – 09	37	527	4
07 – 09	38	530	4
07 – 09	39	533	4
07 – 09	40	535	4
07 – 09	41	538	4
07 – 09	42	541	4
07 – 09	43	543	4
07 – 09	44	546	4
07 – 09	45	549	4
07 – 09	46	552	4
07 – 09	47	557	6
07 – 09	48	565	10

**Grade 11 On-Demand Writing,
Forms 10 – 12**

Form	Raw Score	Scale Score	Conditional SEM
10 – 12	0	400	.
10 – 12	12	457	10
10 – 12	13	465	6
10 – 12	14	471	5
10 – 12	15	475	4
10 – 12	16	478	4
10 – 12	17	480	3
10 – 12	18	483	4
10 – 12	19	486	4
10 – 12	20	489	4
10 – 12	21	493	4
10 – 12	22	496	3
10 – 12	23	498	3
10 – 12	24	500	3
10 – 12	25	501	3
10 – 12	26	503	3
10 – 12	27	504	3
10 – 12	28	505	3
10 – 12	29	506	3
10 – 12	30	508	3
10 – 12	31	509	3
10 – 12	32	511	3
10 – 12	33	513	3
10 – 12	34	515	4
10 – 12	35	519	4
10 – 12	36	522	4
10 – 12	37	526	4
10 – 12	38	529	4
10 – 12	39	532	4
10 – 12	40	535	3
10 – 12	41	537	3
10 – 12	42	539	3
10 – 12	43	542	3
10 – 12	44	544	4
10 – 12	45	547	4
10 – 12	46	550	4
10 – 12	47	555	6
10 – 12	48	563	10

Appendix H. Score Frequency Distributions

Figure 1. Reading Grade 3 Score Frequency and Cumulative Frequency Distributions

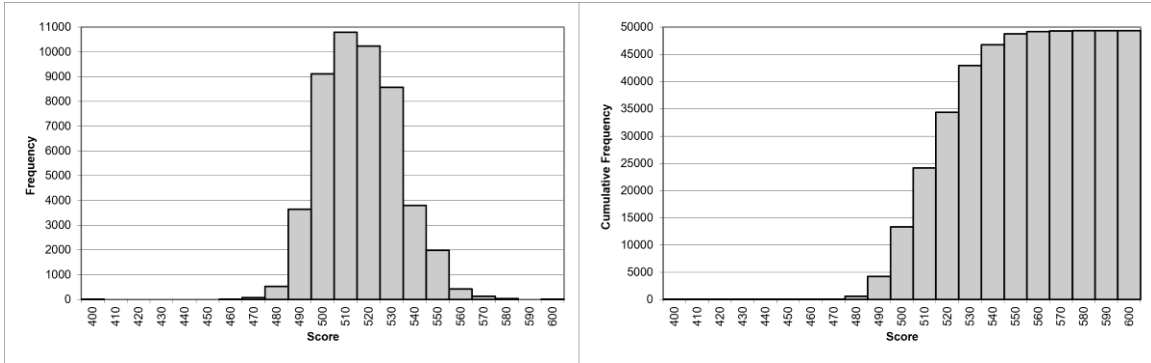


Figure 2. Reading Grade 4 Score Frequency and Cumulative Frequency Distributions

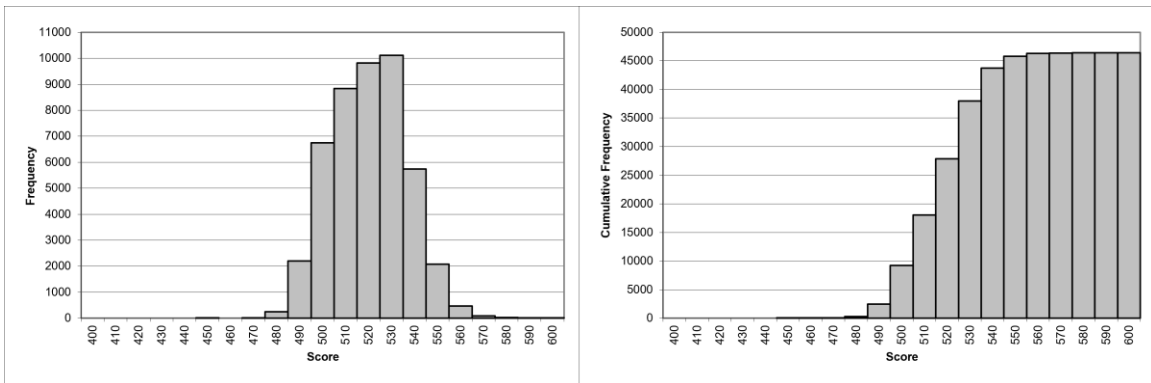


Figure 3. Reading Grade 5 Score Frequency and Cumulative Frequency Distributions

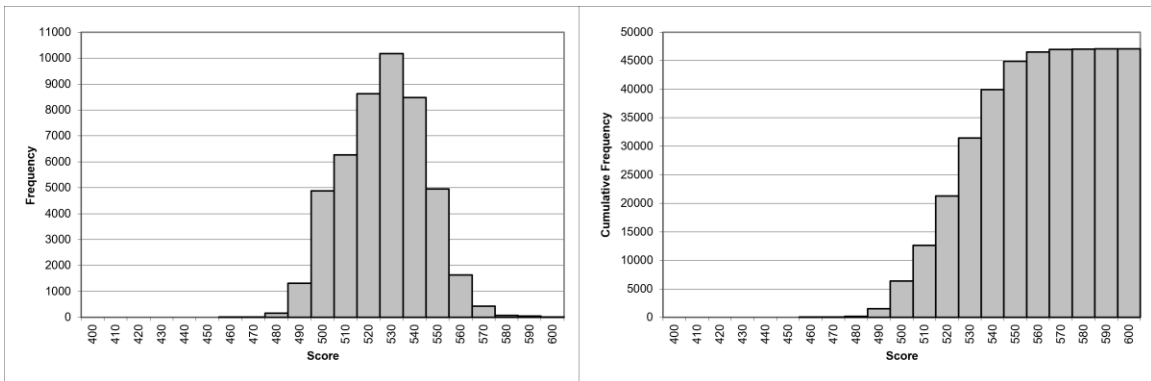


Figure 4. Reading Grade 6 Score Frequency and Cumulative Frequency Distributions

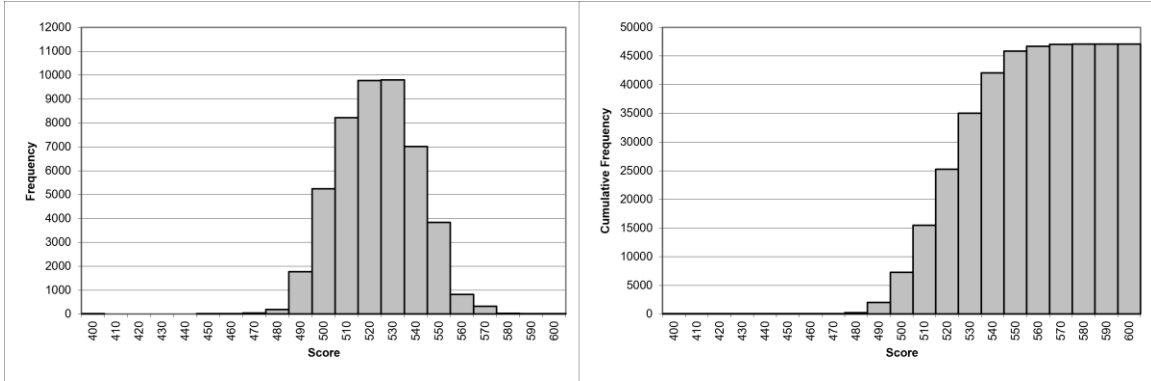


Figure 5. Reading Grade 7 Score Frequency and Cumulative Frequency Distributions

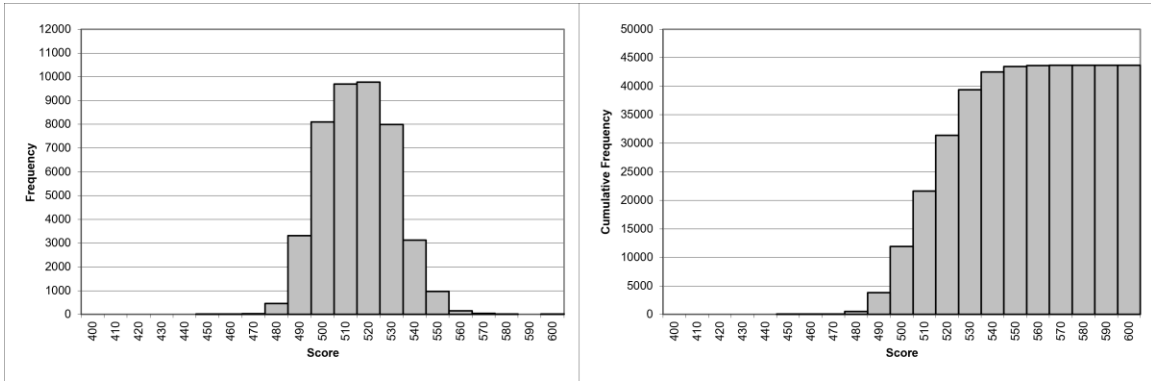


Figure 6. Reading Grade 8 Score Frequency and Cumulative Frequency Distributions

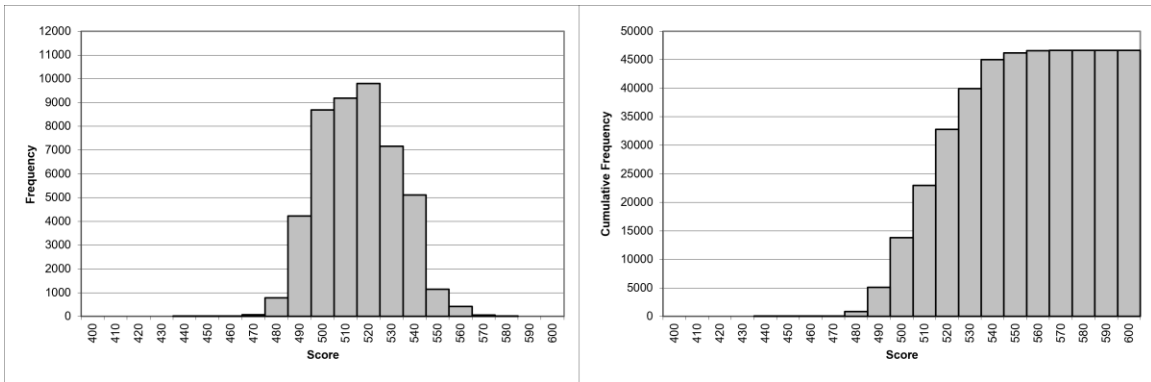


Figure 7. Reading Grade 10 Score Frequency and Cumulative Frequency Distributions

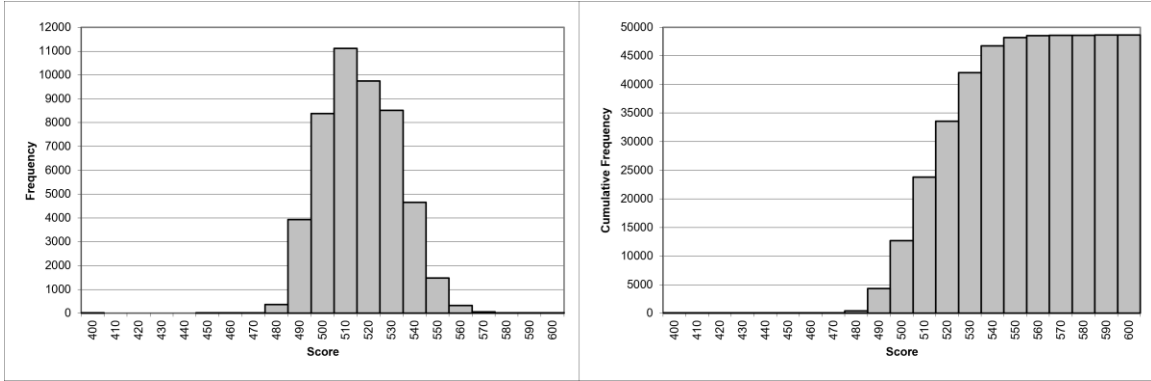


Figure 8. Mathematics Grade 3 Score Frequency and Cumulative Frequency Distributions

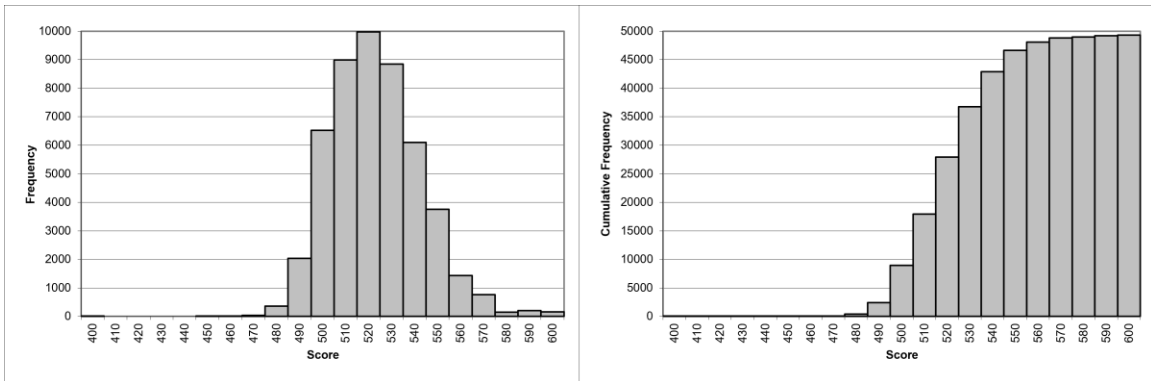


Figure 9. Mathematics Grade 4 Score Frequency and Cumulative Frequency Distributions

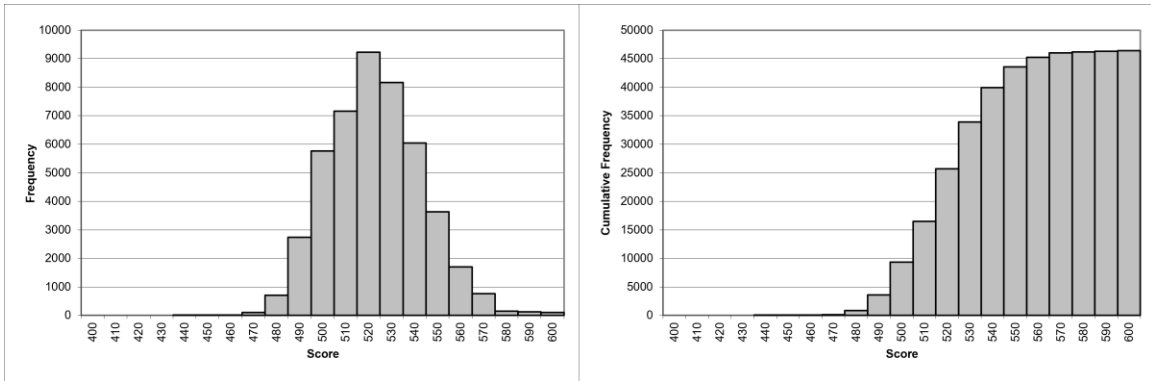


Figure 10. Mathematics Grade 5 Score Frequency and Cumulative Frequency Distributions

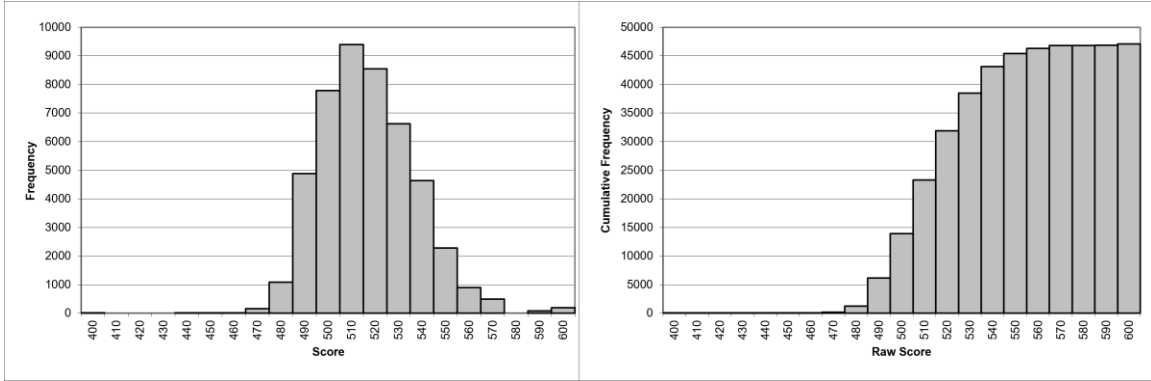


Figure 11. Mathematics Grade 6 Score Frequency and Cumulative Frequency Distributions

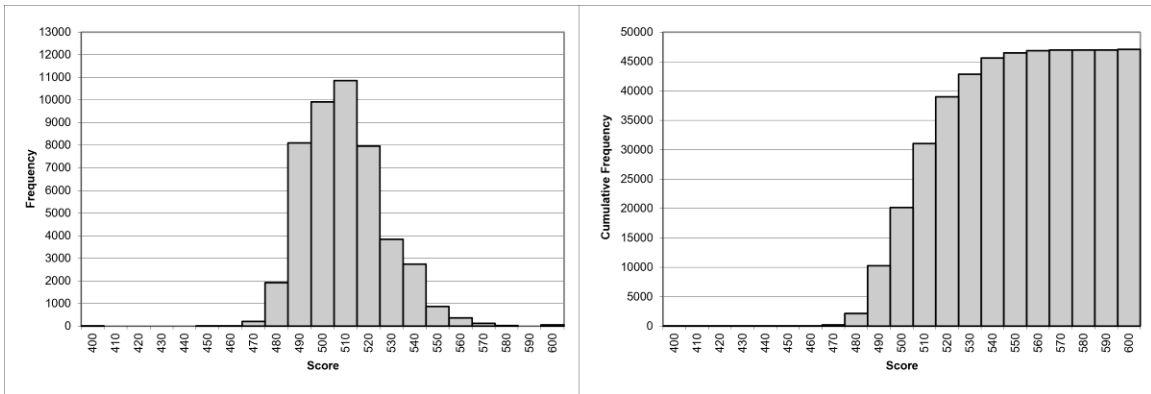


Figure 12. Mathematics Grade 7 Score Frequency and Cumulative Frequency Distributions

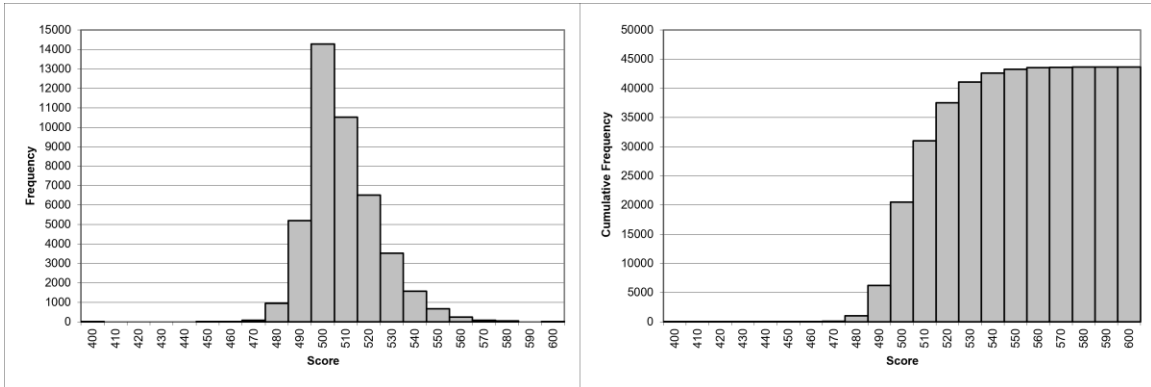


Figure 13. Mathematics Grade 8 Score Frequency and Cumulative Frequency Distributions

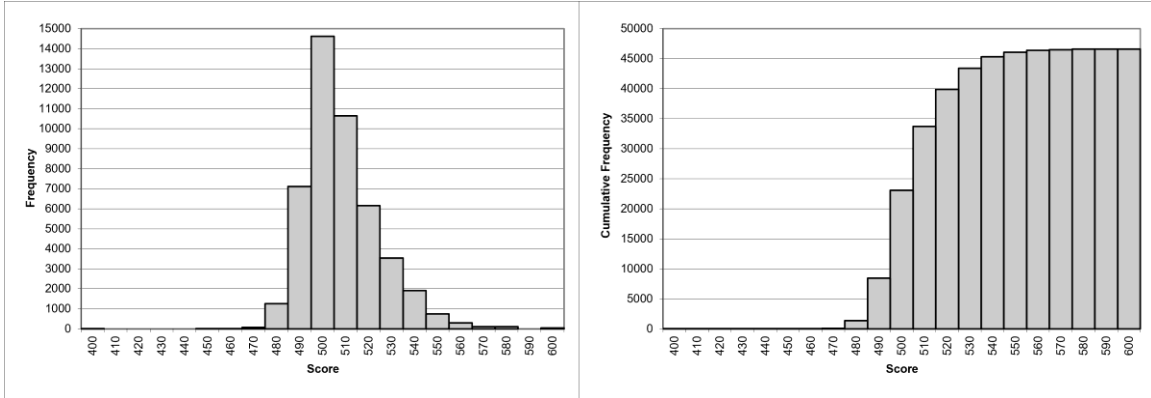


Figure 14. Mathematics Grade 10 Score Frequency and Cumulative Frequency Distributions

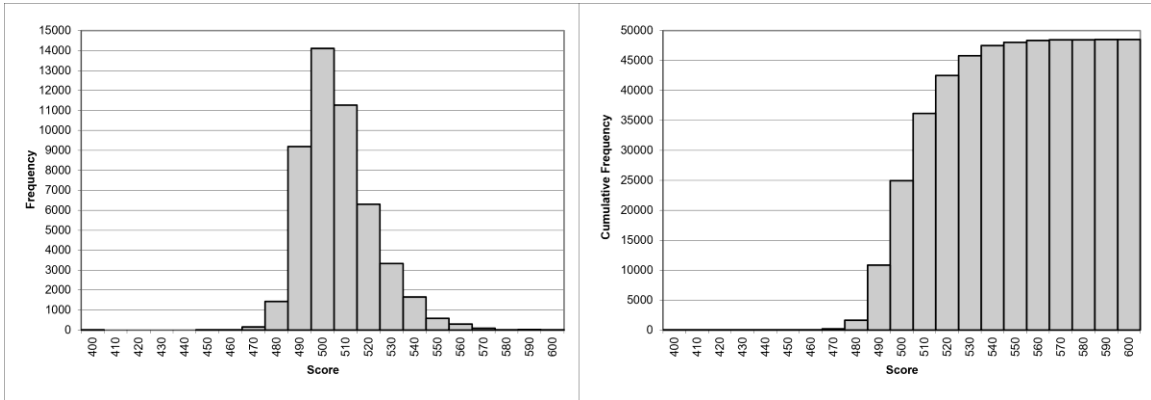


Figure 15. Science Grade 4 Score Frequency and Cumulative Frequency Distributions

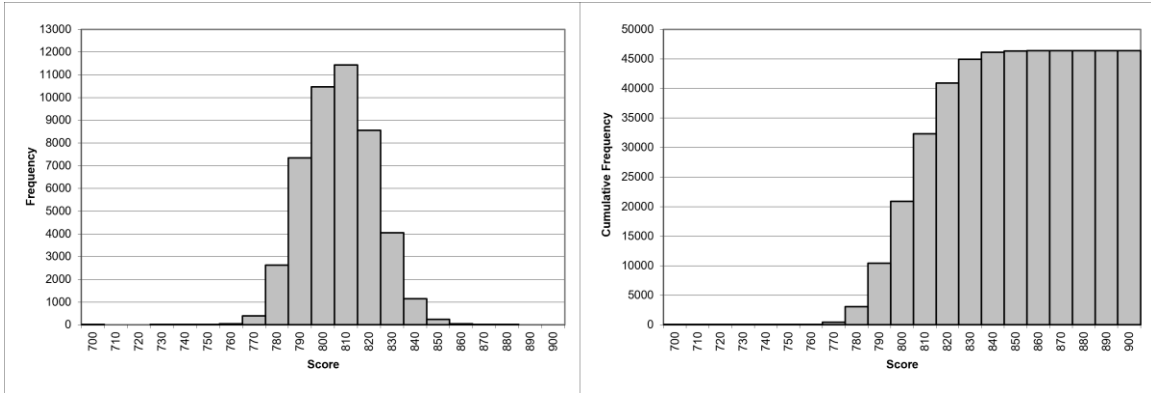


Figure 16. Science Grade 7 Score Frequency and Cumulative Frequency Distributions

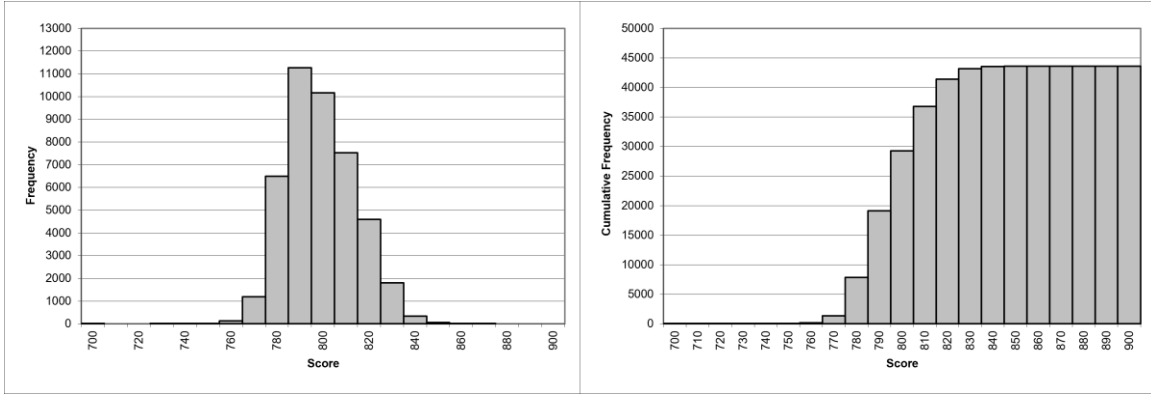


Figure 17. Science Grade 11 Score Frequency and Cumulative Frequency Distributions

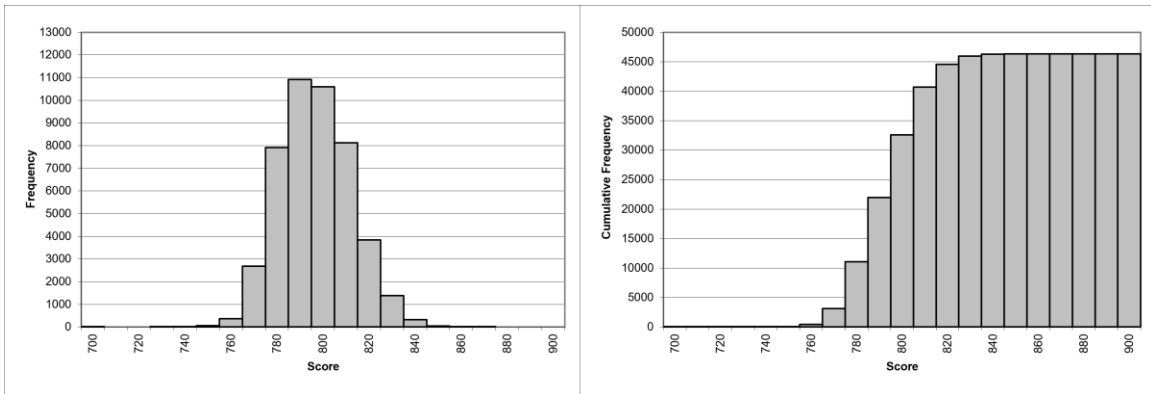


Figure 18. Social Studies Grade 5 Score Frequency and Cumulative Frequency Distributions

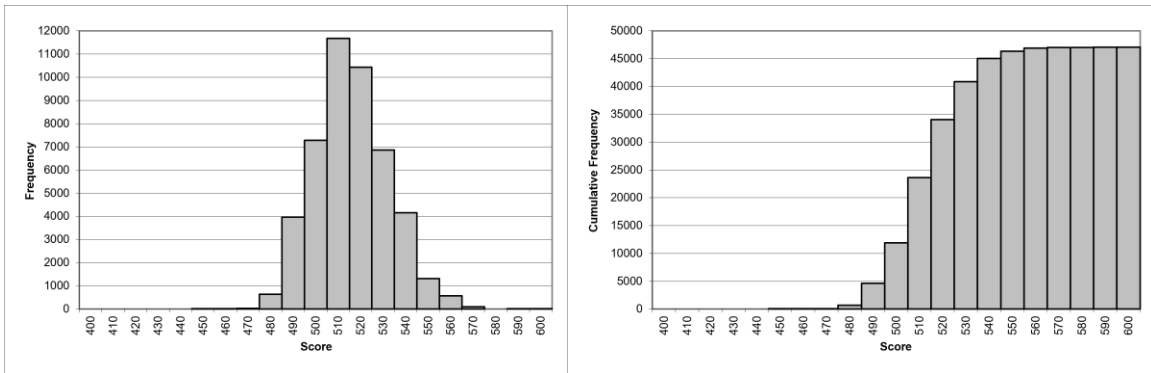


Figure 19. Social Studies Grade 8 Score Frequency and Cumulative Frequency Distributions

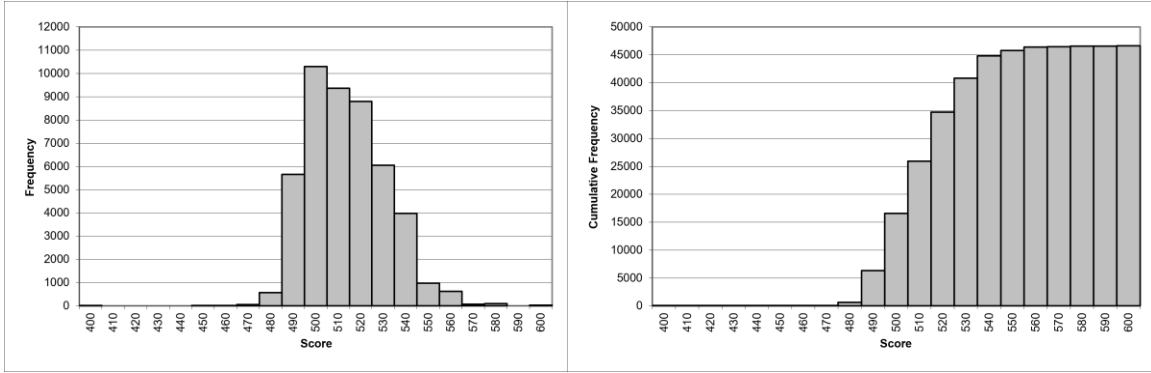


Figure 20. Social Studies Grade 11 Score Frequency and Cumulative Frequency Distributions

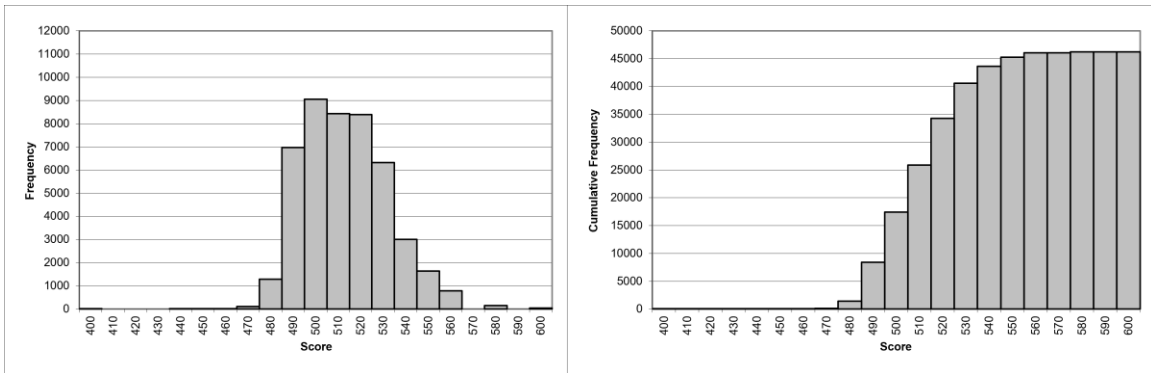


Figure 21. Editing and Mechanics Grade 5 Score Frequency and Cumulative Frequency Distributions

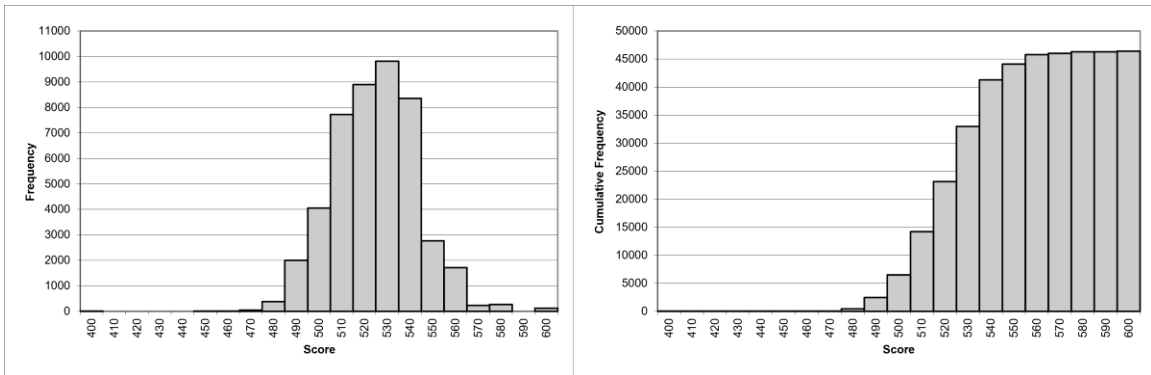


Figure 22. Editing and Mechanics Grade 8 Score Frequency and Cumulative Frequency Distributions

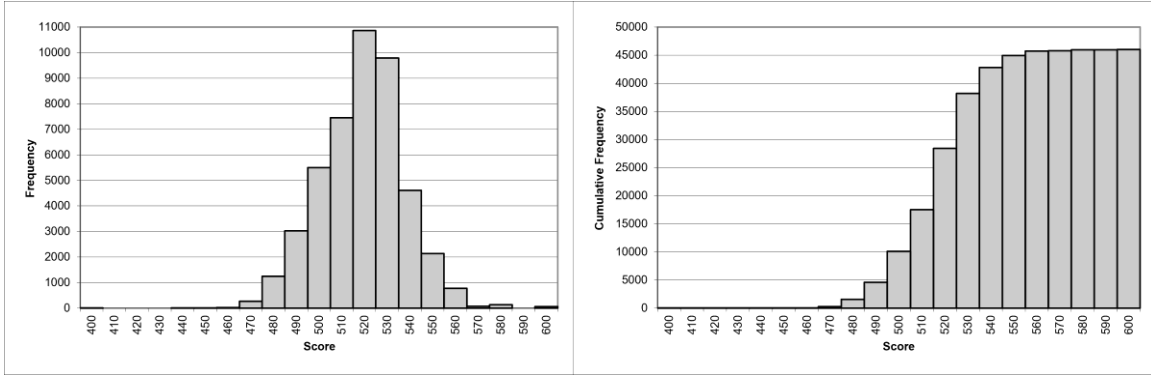


Figure 23. Editing and Mechanics Grade 11 Score Frequency and Cumulative Frequency Distributions

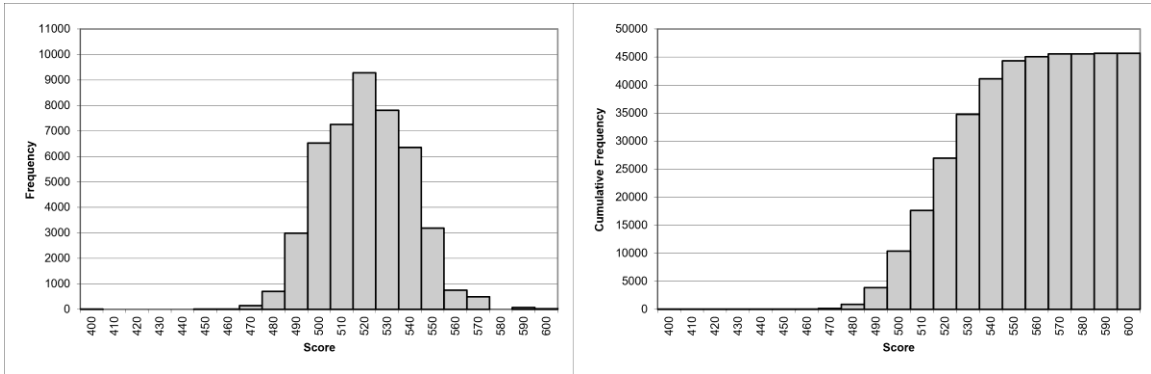


Figure 24. On-Demand Writing Grade 5 Score Frequency and Cumulative Frequency Distributions

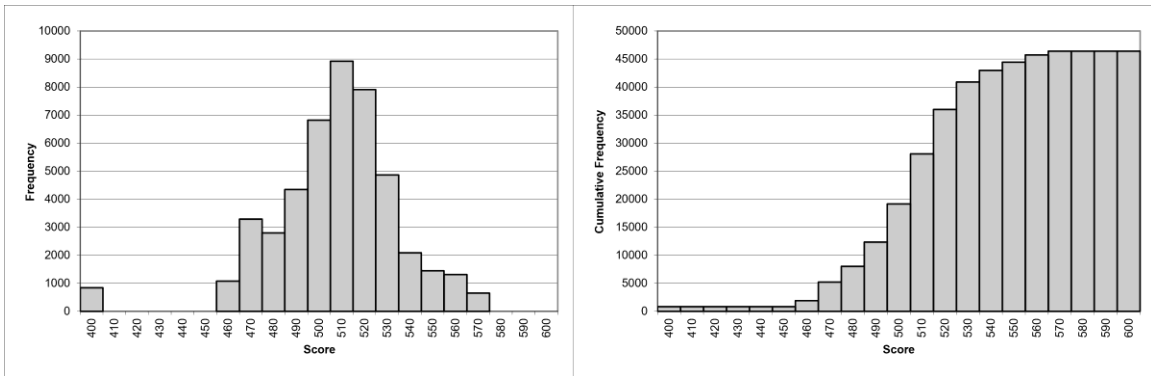


Figure 25. On-Demand Writing Grade 8 Score Frequency and Cumulative Frequency Distributions

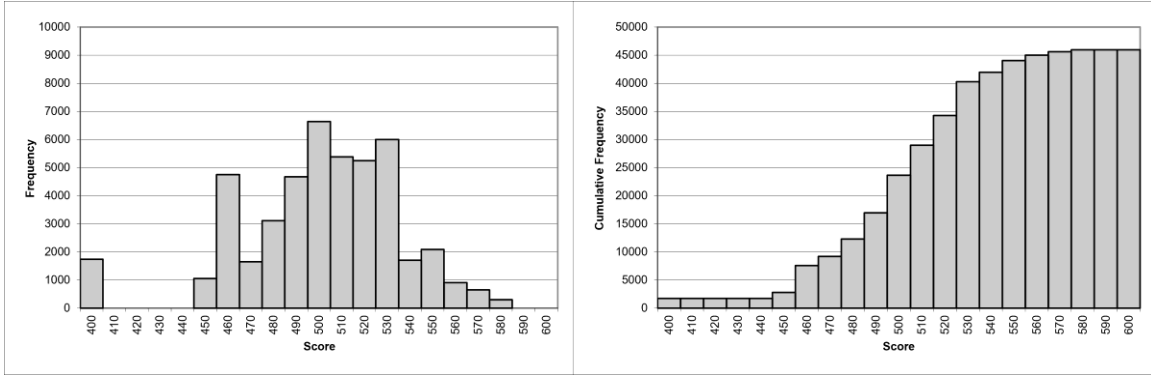
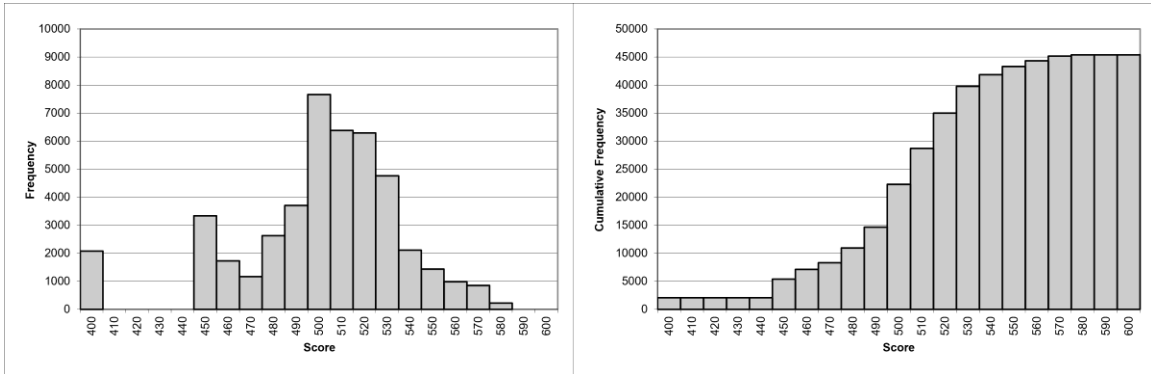


Figure 26. On-Demand Writing Grade 11 Score Frequency and Cumulative Frequency Distributions



Appendix I. Scale Score Descriptive Statistics⁵

Grade 3 Reading

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	49,356	511.96	16.5	500	511	523	600	0.30
Gender	Female	24,083	512.65	16.5	500	511	524	600	0.28
	Male	25,273	511.30	16.5	499	510	523	598	0.32
Ethnicity	Hispanic	4,994	507.04	15.2	496	506	517	598	0.50
	Asian	1,058	516.78	16.8	504	517	528	598	0.35
	Native Hawaiian/Pacific Islander	113	506.31	15.4	494	504	517	542	0.27
	Black/African American	5,049	503.99	14.8	493	502	513	574	0.52
	American Indian	63	510.57	15.4	500	510	521	546	-0.00
	White	35,137	513.76	16.5	502	513	525	600	0.24
	Two or More Races	2,942	511.00	15.7	499	510	522	574	0.27
Migrant	Non-Migrant	49,057	512.01	16.5	500	511	523	600	0.30
	Migrant	299	503.90	14.0	494	501	513	564	0.72
LEP	Non-LEP	44,599	512.83	16.6	500	511	524	600	0.26
	LEP	4,757	503.78	13.4	494	502	513	562	0.40
Economic Disadvantage	Economically Disadvantaged	31,696	509.00	15.8	497	508	519	600	0.41
	Not Economically Disadvantaged	17,660	517.26	16.5	506	517	528	598	0.09
IEP	Non-IEP	40,323	513.14	16.3	501	513	524	598	0.24
	IEP	9,033	506.68	16.6	495	504	517	600	0.67

Grade 4 Reading

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,410	515.75	16.0	503	515	528	600	0.09
Gender	Female	22,770	516.25	16.1	504	517	528	600	0.08
	Male	23,639	515.27	16.0	503	515	526	600	0.10
Ethnicity	Hispanic	4,695	509.91	15.1	498	509	521	581	0.34
	Asian	1,026	519.90	15.9	509	521	530	565	-0.03
	Native Hawaiian/Pacific Islander	77	512.95	16.7	501	511	522	552	0.10
	Black/African American	4,937	507.58	14.9	496	506	518	568	0.32
	American Indian	43	517.05	19.4	501	519	530	565	-0.05
	White	32,945	517.79	15.7	506	518	530	600	0.03
	Two or More Races	2,685	514.52	16.0	502	515	526	577	0.16
Migrant	Non-Migrant	46,160	515.80	16.0	504	517	528	600	0.09
	Migrant	250	506.30	14.2	496	503	515	542	0.51
LEP	Non-LEP	42,249	516.78	16.0	505	517	528	600	0.04
	LEP	4,161	505.37	12.7	496	504	514	560	0.31
Economic Disadvantage	Economically Disadvantaged	29,021	512.44	15.4	500	512	524	581	0.19
	Not Economically Disadvantaged	17,389	521.28	15.6	510	522	532	600	-0.10
IEP	Non-IEP	38,102	517.24	15.7	506	517	528	600	0.02
	IEP	8,308	508.91	15.7	498	507	519	581	0.55

⁵ Scale score statistics are not reported on n-counts less than 10.

Appendix I. Scale Score Descriptive Statistics

Grade 5 Reading

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	47,086	521.83	17.7	509	523	534	600	0.04
Gender	Female	22,910	523.05	17.6	511	523	536	600	0.01
	Male	24,176	520.67	17.6	507	521	534	600	0.06
Ethnicity	Hispanic	4,746	515.20	17.0	503	515	527	586	0.27
	Asian	1,047	527.22	18.7	515	529	539	583	-0.17
	Native Hawaiian/Pacific Islander	97	518.20	17.3	505	517	531	562	-0.07
	Black/African American	4,959	512.88	16.6	500	511	525	573	0.28
	American Indian	74	518.45	19.2	501	519	531	562	0.17
	White	33,507	524.02	17.3	511	525	536	600	-0.02
	Two or More Races	2,656	520.83	17.1	509	521	534	573	0.03
Migrant	Non-Migrant	46,857	521.89	17.7	509	523	534	600	0.03
	Migrant	229	509.63	17.2	498	507	519	573	0.66
LEP	Non-LEP	43,795	523.03	17.4	511	523	536	600	0.00
	LEP	3,291	505.78	13.4	496	505	515	565	0.36
Economic Disadvantage	Economically Disadvantaged	29,231	518.03	16.9	505	519	529	586	0.12
	Not Economically Disadvantaged	17,855	528.04	17.2	517	529	539	600	-0.15
IEP	Non-IEP	39,374	523.93	17.0	511	525	536	600	0.01
	IEP	7,712	511.11	17.1	498	509	523	586	0.46

Grade 6 Reading

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	47,092	518.93	17.3	506	519	531	600	0.13
Gender	Female	22,858	520.75	17.1	508	521	533	600	0.14
	Male	24,233	517.21	17.2	504	517	529	600	0.14
Ethnicity	Hispanic	4,677	512.96	16.7	501	512	524	580	0.28
	Asian	1,057	525.82	17.6	514	528	539	583	-0.13
	Native Hawaiian/Pacific Islander	87	517.57	14.2	507	519	526	555	0.20
	Black/African American	5,006	510.01	15.9	499	509	521	600	0.43
	American Indian	65	515.20	14.3	506	514	524	542	-0.05
	White	33,610	520.98	16.9	509	521	533	600	0.09
	Two or More Races	2,589	517.60	16.7	505	517	529	580	0.12
Migrant	Non-Migrant	46,830	518.99	17.3	506	519	531	600	0.13
	Migrant	262	507.36	16.3	497	505	518	555	0.39
LEP	Non-LEP	44,444	519.95	17.0	508	520	531	600	0.11
	LEP	2,648	501.75	12.0	495	501	509	546	0.25
Economic Disadvantage	Economically Disadvantaged	28,773	515.26	16.5	503	515	526	600	0.21
	Not Economically Disadvantaged	18,319	524.70	16.9	513	526	536	600	-0.02
IEP	Non-IEP	40,206	520.96	16.8	509	521	533	600	0.09
	IEP	6,886	507.04	15.2	497	505	517	570	0.55

Appendix I. Scale Score Descriptive Statistics

Grade 7 Reading

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	43,676	510.95	15.5	499	511	522	600	0.16
Gender	Female	21,068	512.52	15.1	501	512	523	600	0.15
	Male	22,608	509.49	15.6	497	509	522	575	0.19
Ethnicity	Hispanic	4,327	505.50	14.9	494	505	516	563	0.30
	Asian	1,029	517.99	16.6	506	520	530	600	0.06
	Native Hawaiian/Pacific Islander	86	510.38	13.8	499	509	522	538	-0.09
	Black/African American	4,448	503.50	14.0	493	502	512	575	0.41
	American Indian	50	508.90	12.6	499	508	518	542	0.32
	White	31,389	512.57	15.2	501	512	524	576	0.10
	Two or More Races	2,347	510.47	14.6	500	509	522	564	0.26
Migrant	Non-Migrant	43,443	511.00	15.4	499	511	522	600	0.16
	Migrant	233	502.21	13.6	491	501	511	538	0.22
LEP	Non-LEP	41,054	511.90	15.2	501	512	523	600	0.13
	LEP	2,622	496.20	10.7	489	495	503	540	0.33
Economic Disadvantage	Economically Disadvantaged	26,069	507.45	14.5	497	506	518	576	0.26
	Not Economically Disadvantaged	17,607	516.14	15.3	505	518	527	600	-0.05
IEP	Non-IEP	37,967	512.63	15.0	502	512	523	600	0.11
	IEP	5,709	499.79	13.4	491	497	507	575	0.72

Grade 8 Reading

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,652	510.65	16.9	497	511	523	580	0.18
Gender	Female	22,625	513.23	16.8	501	513	526	580	0.14
	Male	24,026	508.21	16.7	495	507	521	580	0.23
Ethnicity	Hispanic	4,750	505.21	16.2	493	503	517	567	0.30
	Asian	987	517.86	17.8	505	519	531	567	-0.09
	Native Hawaiian/Pacific Islander	99	506.80	15.2	495	505	517	540	0.34
	Black/African American	5,076	502.27	15.2	491	501	513	559	0.44
	American Indian	54	510.17	17.4	499	507	519	553	0.67
	White	33,301	512.59	16.7	501	513	523	580	0.13
	Two or More Races	2,383	509.40	16.2	497	509	521	567	0.30
Migrant	Non-Migrant	46,406	510.71	16.9	497	511	523	580	0.18
	Migrant	246	498.56	15.0	486	497	509	548	0.37
LEP	Non-LEP	43,807	511.68	16.7	499	511	523	580	0.16
	LEP	2,845	494.79	11.5	486	493	501	536	0.11
Economic Disadvantage	Economically Disadvantaged	27,645	506.85	16.0	495	505	517	580	0.28
	Not Economically Disadvantaged	19,007	516.17	16.7	505	517	528	580	0.01
IEP	Non-IEP	40,936	512.44	16.5	501	513	523	580	0.13
	IEP	5,716	497.78	13.7	489	495	505	567	0.74

Appendix I. Scale Score Descriptive Statistics

Grade 10 Reading

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	48,630	512.20	16.1	500	511	524	600	0.27
Gender	Female	23,750	514.48	15.7	503	514	526	584	0.17
	Male	24,879	510.02	16.2	497	508	521	600	0.39
Ethnicity	Hispanic	4,905	507.03	15.3	495	505	517	584	0.45
	Asian	940	520.07	17.8	507	520	533	571	0.04
	Native Hawaiian/Pacific Islander	82	510.62	15.9	501	508	519	555	0.61
	Black/African American	5,425	504.68	14.7	495	503	514	584	0.40
	American Indian	72	513.21	16.0	501	514	525	558	0.08
	White	34,827	513.93	15.8	502	514	526	600	0.22
	Two or More Races	2,378	511.54	15.6	500	510	522	560	0.33
Migrant	Non-Migrant	48,383	512.26	16.1	500	511	524	600	0.26
	Migrant	247	499.65	12.6	490	497	507	543	0.87
LEP	Non-LEP	45,891	513.15	15.9	501	512	524	600	0.24
	LEP	2,739	496.27	10.1	490	495	502	537	0.13
Economic Disadvantage	Economically Disadvantaged	27,655	508.48	14.9	497	507	519	600	0.35
	Not Economically Disadvantaged	20,975	517.10	16.2	505	517	528	584	0.09
IEP	Non-IEP	43,396	513.67	15.8	502	513	524	600	0.23
	IEP	5,234	499.99	12.5	493	497	507	571	0.58

Grade 3 Mathematics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	49,350	518.58	19.7	505	517	531	600	0.60
Gender	Female	24,085	517.01	18.8	503	515	529	600	0.59
	Male	25,265	520.07	20.4	505	519	533	600	0.57
Ethnicity	Hispanic	4,999	512.59	17.4	500	511	524	600	0.57
	Asian	1,062	528.51	22.6	513	528	543	600	0.06
	Native Hawaiian/Pacific Islander	113	514.56	18.3	501	513	527	560	0.59
	Black/African American	5,047	508.39	16.8	496	507	519	600	0.75
	American Indian	63	517.86	21.2	503	515	530	582	0.90
	White	35,124	520.76	19.6	507	519	533	600	0.58
	Two or More Races	2,942	516.71	18.9	503	515	528	600	0.62
Migrant	Non-Migrant	49,050	518.64	19.7	505	517	531	600	0.60
	Migrant	300	508.31	15.8	497	507	519	555	0.11
LEP	Non-LEP	44,585	519.49	19.8	505	517	532	600	0.59
	LEP	4,765	509.99	16.7	498	508	520	600	0.43
Economic Disadvantage	Economically Disadvantaged	31,684	514.57	18.1	501	513	526	600	0.60
	Not Economically Disadvantaged	17,666	525.77	20.3	511	525	538	600	0.50
IEP	Non-IEP	40,326	520.43	19.2	507	519	532	600	0.59
	IEP	9,024	510.27	19.5	496	507	521	600	0.94

Appendix I. Scale Score Descriptive Statistics

Grade 4 Mathematics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,412	518.60	20.3	504	517	532	600	0.35
Gender	Female	22,770	516.99	19.8	503	516	530	600	0.40
	Male	23,641	520.15	20.8	505	520	534	600	0.30
Ethnicity	Hispanic	4,704	512.14	19.2	499	511	524	600	0.46
	Asian	1,033	529.80	23.6	513	530	546	600	0.17
	Native Hawaiian/Pacific Islander	77	516.51	19.5	500	513	532	556	0.19
	Black/African American	4,936	507.12	18.0	494	505	518	600	0.55
	American Indian	43	519.14	20.1	503	516	531	562	0.43
	White	32,933	521.05	19.9	507	520	534	600	0.32
	Two or More Races	2,684	516.63	19.5	503	515	530	600	0.42
Migrant	Non-Migrant	46,161	518.66	20.3	504	517	532	600	0.35
	Migrant	251	507.38	18.0	495	505	518	569	0.40
LEP	Non-LEP	42,235	519.72	20.3	505	519	533	600	0.34
	LEP	4,177	507.20	17.3	495	506	517	600	0.42
Economic Disadvantage	Economically Disadvantaged	29,018	514.11	18.9	500	513	526	600	0.38
	Not Economically Disadvantaged	17,394	526.07	20.4	513	526	540	600	0.25
IEP	Non-IEP	38,107	520.91	19.8	507	520	534	600	0.35
	IEP	8,305	507.96	19.5	494	505	520	600	0.67

Grade 5 Mathematics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	47,090	512.79	20.0	498	511	526	593	0.63
Gender	Female	22,915	511.82	19.3	498	510	524	593	0.66
	Male	24,175	513.70	20.6	498	512	527	593	0.59
Ethnicity	Hispanic	4,753	506.68	18.5	493	504	518	592	0.68
	Asian	1,049	524.12	24.0	507	523	537	593	0.58
	Native Hawaiian/Pacific Islander	97	510.99	18.7	499	509	523	592	0.93
	Black/African American	4,958	501.51	16.5	490	499	512	593	0.73
	American Indian	74	511.51	21.5	492	512	527	551	0.20
	White	33,503	515.13	19.7	501	514	528	593	0.57
	Two or More Races	2,656	510.85	19.4	497	508	522	593	0.95
Migrant	Non-Migrant	46,860	512.85	20.0	498	511	526	593	0.63
	Migrant	230	500.52	17.4	490	499	510	569	1.02
LEP	Non-LEP	43,787	513.87	19.9	499	512	526	593	0.61
	LEP	3,303	498.38	14.8	488	496	507	569	0.78
Economic Disadvantage	Economically Disadvantaged	29,231	508.19	18.2	494	506	520	593	0.62
	Not Economically Disadvantaged	17,859	520.31	20.6	506	520	533	593	0.54
IEP	Non-IEP	39,380	514.92	19.7	501	514	527	593	0.62
	IEP	7,710	501.91	18.2	489	498	512	593	1.00

Appendix I. Scale Score Descriptive Statistics

Grade 6 Mathematics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	47,061	505.23	17.2	492	503	515	596	0.74
Gender	Female	22,844	504.57	16.5	492	503	515	596	0.69
	Male	24,216	505.84	17.9	493	504	516	596	0.75
Ethnicity	Hispanic	4,682	499.26	15.1	488	497	508	596	0.84
	Asian	1,055	516.97	21.8	501	515	531	596	0.69
	Native Hawaiian/Pacific Islander	87	502.71	14.3	492	501	513	544	0.42
	Black/African American	5,005	495.68	13.4	487	494	503	568	0.70
	American Indian	64	501.25	16.1	491	500	508	549	0.79
	White	33,582	507.29	17.1	495	506	518	596	0.66
	Two or More Races	2,585	503.13	16.4	492	501	513	596	0.92
Migrant	Non-Migrant	46,799	505.28	17.2	492	503	515	596	0.74
	Migrant	262	496.29	14.2	486	495	504	556	1.04
LEP	Non-LEP	44,409	506.08	17.2	494	504	516	596	0.72
	LEP	2,652	490.98	10.8	484	490	497	568	0.70
Economic Disadvantage	Economically Disadvantaged	28,747	501.12	15.3	490	499	510	596	0.71
	Not Economically Disadvantaged	18,314	511.67	18.2	499	510	522	596	0.61
IEP	Non-IEP	40,184	506.94	17.0	495	504	517	596	0.73
	IEP	6,877	495.20	14.9	486	492	502	572	1.12

Grade 7 Mathematics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	43,663	504.57	14.9	494	502	512	600	0.92
Gender	Female	21,066	504.04	14.4	494	502	512	600	0.91
	Male	22,597	505.07	15.4	494	502	513	600	0.92
Ethnicity	Hispanic	4,329	500.22	12.7	492	498	507	578	0.86
	Asian	1,032	515.45	21.4	500	512	528	600	0.64
	Native Hawaiian/Pacific Islander	87	502.66	14.0	493	500	512	535	0.44
	Black/African American	4,446	497.16	11.0	490	496	503	565	0.76
	American Indian	50	502.06	12.7	495	500	508	545	1.01
	White	31,375	506.00	15.0	495	504	514	600	0.83
	Two or More Races	2,344	502.89	14.1	493	500	510	579	0.99
Migrant	Non-Migrant	43,429	504.61	14.9	494	502	512	600	0.92
	Migrant	234	497.32	11.8	490	496	504	559	0.70
LEP	Non-LEP	41,030	505.21	15.0	495	503	513	600	0.91
	LEP	2,633	494.55	9.7	489	493	500	546	0.18
Economic Disadvantage	Economically Disadvantaged	26,060	501.02	12.9	492	499	508	600	0.92
	Not Economically Disadvantaged	17,603	509.83	16.1	498	508	519	600	0.75
IEP	Non-IEP	37,960	505.61	15.1	495	503	514	600	0.87
	IEP	5,703	497.63	12.0	491	496	503	600	1.36

Appendix I. Scale Score Descriptive Statistics

Grade 8 Mathematics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,633	503.64	16.1	492	501	512	600	1.08
Gender	Female	22,611	503.74	15.7	493	501	512	599	1.03
	Male	24,021	503.55	16.4	492	500	512	600	1.12
Ethnicity	Hispanic	4,749	499.31	13.7	491	497	506	599	1.05
	Asian	987	516.44	22.0	500	513	528	600	1.02
	Native Hawaiian/Pacific Islander	99	500.32	13.8	492	498	505	565	1.41
	Black/African American	5,074	496.17	11.7	489	494	501	565	1.06
	American Indian	54	503.15	16.6	494	498	511	573	1.85
	White	33,287	505.16	16.2	494	502	514	600	0.97
	Two or More Races	2,381	501.92	15.2	492	499	510	578	1.18
Migrant	Non-Migrant	46,386	503.69	16.1	492	501	512	600	1.08
	Migrant	247	496.00	12.4	489	494	501	552	1.21
LEP	Non-LEP	43,785	504.30	16.2	493	501	513	600	1.05
	LEP	2,848	493.63	9.7	488	493	499	578	0.97
Economic Disadvantage	Economically Disadvantaged	27,631	499.93	13.8	491	497	507	600	1.08
	Not Economically Disadvantaged	19,002	509.05	17.5	496	506	519	600	0.91
IEP	Non-IEP	40,924	504.80	16.3	494	501	514	600	1.02
	IEP	5,709	495.38	11.5	489	494	499	571	1.56

Grade 10 Mathematics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	48,531	502.57	15.7	491	500	511	600	0.96
Gender	Female	23,704	502.67	14.8	492	501	511	600	0.83
	Male	24,826	502.48	16.5	491	499	511	600	1.05
Ethnicity	Hispanic	4,892	498.06	13.7	489	496	505	600	1.01
	Asian	941	516.40	24.0	499	512	531	600	0.82
	Native Hawaiian/Pacific Islander	82	501.62	17.2	491	499	510	582	1.50
	Black/African American	5,394	495.29	12.4	487	494	501	600	1.15
	American Indian	73	504.21	20.6	492	499	510	581	1.98
	White	34,778	504.06	15.6	492	502	513	600	0.82
	Two or More Races	2,370	501.07	14.8	491	499	509	582	1.03
Migrant	Non-Migrant	48,282	502.62	15.7	491	500	511	600	0.96
	Migrant	249	493.62	11.8	487	492	499	553	0.96
LEP	Non-LEP	45,807	503.25	15.7	492	501	512	600	0.95
	LEP	2,724	491.27	10.1	486	491	497	560	0.54
Economic Disadvantage	Economically Disadvantaged	27,571	498.65	13.4	490	497	506	600	0.99
	Not Economically Disadvantaged	20,960	507.74	17.0	496	506	518	600	0.77
IEP	Non-IEP	43,328	503.76	15.8	492	501	512	600	0.94
	IEP	5,203	492.65	10.8	487	492	497	581	0.83

Appendix I. Scale Score Descriptive Statistics

Grade 4 Science

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,403	802.50	15.1	792	803	813	874	0.07
Gender	Female	22,765	802.19	14.6	792	802	812	874	0.08
	Male	23,637	802.80	15.5	791	803	813	874	0.06
Ethnicity	Hispanic	4,701	797.09	14.2	787	796	807	860	0.12
	Asian	1,033	805.96	16.4	794	806	817	853	-0.30
	Native Hawaiian/Pacific Islander	77	797.58	14.3	788	798	808	828	-0.06
	Black/African American	4,935	793.85	13.6	784	793	803	847	0.16
	American Indian	43	802.91	16.9	790	803	814	841	0.11
	White	32,928	804.59	14.7	794	805	815	874	0.06
	Two or More Races	2,684	801.04	14.4	791	801	811	853	0.08
Migrant	Non-Migrant	46,152	802.55	15.1	792	803	813	874	0.07
	Migrant	251	793.79	13.9	784	793	803	832	0.19
LEP	Non-LEP	42,229	803.45	15.0	793	803	814	874	0.06
	LEP	4,174	792.91	12.5	784	793	801	860	-0.14
Economic Disadvantage	Economically Disadvantaged	29,014	799.50	14.5	789	799	810	873	0.17
	Not Economically Disadvantaged	17,389	807.50	14.7	798	808	817	874	-0.11
IEP	Non-IEP	38,098	803.68	14.7	794	803	814	874	0.03
	IEP	8,305	797.09	15.7	786	796	807	871	0.41

Grade 7 Science

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	43,614	794.42	14.8	783	793	805	867	0.35
Gender	Female	21,044	794.08	14.1	784	793	803	867	0.33
	Male	22,570	794.75	15.5	783	793	806	855	0.34
Ethnicity	Hispanic	4,327	789.36	13.7	780	787	798	844	0.47
	Asian	1,031	801.43	16.7	789	801	813	854	0.10
	Native Hawaiian/Pacific Islander	87	791.21	17.8	782	790	801	828	-1.33
	Black/African American	4,439	786.61	12.1	779	785	794	843	0.49
	American Indian	50	792.28	14.9	784	791	801	830	-0.57
	White	31,337	796.08	14.8	785	795	807	867	0.28
	Two or More Races	2,343	793.47	14.2	783	792	803	854	0.49
Migrant	Non-Migrant	43,380	794.47	14.8	783	793	805	867	0.35
	Migrant	234	785.58	12.7	776	784	792	827	0.54
LEP	Non-LEP	40,983	795.22	14.7	784	794	805	867	0.33
	LEP	2,631	781.93	10.0	776	781	788	828	0.03
Economic Disadvantage	Economically Disadvantaged	26,015	790.97	13.6	781	790	799	867	0.44
	Not Economically Disadvantaged	17,599	799.52	15.1	788	799	810	854	0.12
IEP	Non-IEP	37,922	795.79	14.7	785	794	806	867	0.29
	IEP	5,692	785.29	12.4	777	783	792	836	0.81

Appendix I. Scale Score Descriptive Statistics

Grade 11 Science

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,322	792.36	15.4	781	792	803	866	0.16
Gender	Female	22,953	793.08	14.6	783	793	803	866	0.11
	Male	23,364	791.66	16.1	780	790	803	861	0.21
Ethnicity	Hispanic	4,567	787.73	14.7	777	787	798	851	0.16
	Asian	917	800.61	17.4	789	800	813	853	0.09
	Native Hawaiian/Pacific Islander	84	791.65	14.2	780	793	802	828	0.10
	Black/African American	5,001	784.33	13.2	775	783	792	839	0.20
	American Indian	57	789.51	15.5	778	788	800	825	0.61
	White	33,612	794.02	15.2	783	794	804	866	0.11
	Two or More Races	2,078	791.46	15.2	780	791	802	846	0.15
Migrant	Non-Migrant	46,159	792.40	15.4	781	792	803	866	0.15
	Migrant	163	782.76	11.8	774	783	792	808	0.30
LEP	Non-LEP	44,157	793.07	15.2	782	792	804	866	0.15
	LEP	2,165	777.97	11.1	772	778	785	832	-0.26
Economic Disadvantage	Economically Disadvantaged	25,065	788.85	14.3	778	787	798	866	0.22
	Not Economically Disadvantaged	21,257	796.51	15.6	785	796	807	861	-0.01
IEP	Non-IEP	41,759	793.42	15.4	782	793	804	866	0.10
	IEP	4,563	782.70	12.0	776	781	790	861	0.34

Grade 5 Social Studies

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	47,034	511.49	16.3	499	510	522	600	0.36
Gender	Female	22,883	511.19	15.8	501	510	521	586	0.35
	Male	24,151	511.77	16.7	499	511	522	600	0.35
Ethnicity	Hispanic	4,741	506.17	15.2	495	505	516	586	0.46
	Asian	1,046	517.77	18.1	505	517	530	581	0.24
	Native Hawaiian/Pacific Islander	97	508.13	15.5	495	507	519	552	0.39
	Black/African American	4,957	503.09	14.0	492	501	512	568	0.48
	American Indian	74	508.77	17.9	494	507	520	559	0.58
	White	33,467	513.41	16.1	503	513	525	600	0.31
	Two or More Races	2,652	510.15	15.7	499	509	520	600	0.48
Migrant	Non-Migrant	46,805	511.54	16.2	499	510	522	600	0.35
	Migrant	229	501.47	14.2	492	501	509	553	0.86
LEP	Non-LEP	43,746	512.43	16.1	501	512	523	600	0.34
	LEP	3,288	498.88	12.0	490	499	507	552	0.41
Economic Disadvantage	Economically Disadvantaged	29,187	508.08	15.3	497	507	518	586	0.41
	Not Economically Disadvantaged	17,847	517.05	16.2	507	517	528	600	0.23
IEP	Non-IEP	39,335	512.93	15.8	501	512	523	600	0.34
	IEP	7,699	504.09	16.6	492	501	514	586	0.78

Appendix I. Scale Score Descriptive Statistics

Grade 8 Social Studies

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,582	509.31	17.6	495	507	522	597	0.53
Gender	Female	22,592	510.06	17.4	498	508	522	597	0.54
	Male	23,989	508.61	17.8	495	506	520	597	0.53
Ethnicity	Hispanic	4,743	504.62	16.1	492	501	516	572	0.61
	Asian	987	518.28	19.0	505	518	531	597	0.24
	Native Hawaiian/Pacific Islander	99	506.88	16.9	493	505	516	572	0.93
	Black/African American	5,068	500.84	14.8	491	498	510	562	0.82
	American Indian	54	511.28	17.9	498	506	527	554	0.69
	White	33,251	511.14	17.7	498	510	524	597	0.46
	Two or More Races	2,378	507.47	16.9	495	505	518	596	0.71
Migrant	Non-Migrant	46,336	509.37	17.6	495	507	522	597	0.53
	Migrant	246	498.43	14.0	489	495	507	559	0.98
LEP	Non-LEP	43,741	510.22	17.6	498	509	522	597	0.49
	LEP	2,841	495.40	10.8	489	493	501	540	0.77
Economic Disadvantage	Economically Disadvantaged	27,591	505.29	16.2	493	503	516	597	0.63
	Not Economically Disadvantaged	18,991	515.16	18.0	501	514	527	597	0.34
IEP	Non-IEP	40,886	510.93	17.5	498	510	522	597	0.47
	IEP	5,696	497.68	13.9	489	495	503	596	1.19

Grade 11 Social Studies

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,231	508.87	18.5	495	507	522	596	0.43
Gender	Female	22,898	509.74	17.5	497	508	522	596	0.46
	Male	23,328	508.02	19.3	493	506	522	596	0.43
Ethnicity	Hispanic	4,548	504.10	17.0	492	502	515	596	0.49
	Asian	917	518.90	20.7	504	520	532	596	0.28
	Native Hawaiian/Pacific Islander	83	508.92	18.9	496	507	520	571	0.63
	Black/African American	4,980	499.95	16.0	488	498	509	596	0.45
	American Indian	57	503.26	17.0	492	503	514	545	0.53
	White	33,562	510.67	18.4	497	509	524	596	0.39
	Two or More Races	2,078	507.31	17.7	494	505	520	572	0.42
Migrant	Non-Migrant	46,067	508.91	18.5	495	507	522	596	0.43
	Migrant	164	497.00	14.4	488	494	504	545	0.72
LEP	Non-LEP	44,079	509.67	18.4	496	508	522	596	0.42
	LEP	2,152	492.45	11.9	486	492	499	572	-0.24
Economic Disadvantage	Economically Disadvantaged	24,992	504.53	16.8	492	502	516	596	0.49
	Not Economically Disadvantaged	21,239	513.97	19.1	500	514	527	596	0.27
IEP	Non-IEP	41,683	510.40	18.3	497	509	522	596	0.39
	IEP	4,548	494.87	13.9	486	493	500	558	0.95

Appendix I. Scale Score Descriptive Statistics

Grade 5 Editing and Mechanics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,435	520.12	18.2	508	521	532	597	0.17
Gender	Female	22,616	521.98	18.1	510	522	534	597	0.13
	Male	23,819	518.35	18.2	506	518	531	597	0.22
Ethnicity	Hispanic	4,714	512.95	17.4	501	513	525	597	0.21
	Asian	1,040	525.91	18.3	513	527	537	597	0.13
	Native Hawaiian/Pacific Islander	97	519.04	17.2	508	520	528	571	0.39
	Black/African American	4,952	510.56	16.8	498	510	522	597	0.25
	American Indian	73	518.70	19.3	506	518	534	559	-0.11
	White	32,920	522.51	17.8	510	523	534	597	0.17
	Two or More Races	2,639	518.84	17.5	506	518	531	597	0.20
Migrant	Non-Migrant	46,208	520.19	18.2	508	521	532	597	0.17
	Migrant	227	507.03	15.9	496	506	518	559	0.16
LEP	Non-LEP	43,163	521.29	17.9	509	522	534	597	0.17
	LEP	3,272	504.70	14.7	494	503	515	559	0.21
Economic Disadvantage	Economically Disadvantaged	28,792	516.26	17.4	504	516	528	597	0.19
	Not Economically Disadvantaged	17,643	526.43	17.7	515	527	537	597	0.14
IEP	Non-IEP	38,887	522.32	17.4	510	522	534	597	0.19
	IEP	7,548	508.77	17.9	496	506	521	597	0.57

Grade 8 Editing and Mechanics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,007	514.98	18.6	502	516	527	596	-0.05
Gender	Female	22,318	518.25	18.1	507	520	530	596	-0.02
	Male	23,688	511.90	18.5	499	514	525	596	-0.05
Ethnicity	Hispanic	4,727	508.33	18.2	494	509	520	596	-0.04
	Asian	976	521.70	18.6	510	523	534	596	-0.16
	Native Hawaiian/Pacific Islander	97	512.11	16.5	504	514	522	551	-0.19
	Black/African American	5,052	506.26	17.7	494	507	518	596	0.10
	American Indian	54	513.89	15.4	500	515	525	558	0.50
	White	32,727	517.14	18.2	507	518	530	596	-0.07
	Two or More Races	2,372	514.40	17.7	504	515	525	596	0.09
Migrant	Non-Migrant	45,761	515.06	18.5	502	516	527	596	-0.05
	Migrant	246	500.42	18.7	485	499	514	594	0.85
LEP	Non-LEP	43,177	516.19	18.1	505	517	528	596	-0.05
	LEP	2,830	496.47	15.0	485	497	507	545	0.10
Economic Disadvantage	Economically Disadvantaged	27,202	511.04	18.0	499	512	523	596	-0.03
	Not Economically Disadvantaged	18,805	520.68	17.9	510	522	533	596	-0.09
IEP	Non-IEP	40,407	517.11	17.8	507	518	528	596	-0.05
	IEP	5,600	499.64	16.9	488	497	511	596	0.32

Appendix I. Scale Score Descriptive Statistics

Grade 11 Editing and Mechanics

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	45,673	516.24	19.0	501	516	529	600	0.16
Gender	Female	22,644	518.93	18.6	506	519	532	600	0.08
	Male	23,024	513.59	19.0	499	513	527	600	0.25
Ethnicity	Hispanic	4,526	509.46	17.9	496	508	521	581	0.30
	Asian	911	523.96	20.5	509	525	537	581	0.04
	Native Hawaiian/Pacific Islander	79	517.49	19.1	504	518	534	561	0.11
	Black/African American	4,968	506.44	16.4	494	506	516	581	0.34
	American Indian	56	510.57	19.9	499	510	523	550	-0.38
	White	33,057	518.49	18.8	504	519	532	600	0.09
	Two or More Races	2,070	515.36	17.7	503	516	527	581	0.11
Migrant	Non-Migrant	45,510	516.29	19.0	503	516	529	600	0.15
	Migrant	163	501.02	16.5	490	499	511	568	0.50
LEP	Non-LEP	43,528	517.26	18.7	504	516	531	600	0.14
	LEP	2,145	495.51	12.1	488	496	503	550	0.25
Economic Disadvantage	Economically Disadvantaged	24,675	511.62	17.7	499	511	524	600	0.24
	Not Economically Disadvantaged	20,998	521.67	19.1	508	523	534	600	-0.02
IEP	Non-IEP	41,184	518.02	18.5	504	518	531	600	0.14
	IEP	4,489	499.87	15.5	490	497	508	561	0.52

Grade 5 On-Demand Writing

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	46,409	502.71	27.5	488	505	518	568	-0.76
Gender	Female	22,607	507.09	26.4	493	509	523	568	-0.69
	Male	23,802	498.55	27.8	484	501	515	568	-0.82
Ethnicity	Hispanic	4,708	494.87	29.9	479	499	515	568	-0.97
	Asian	1,040	513.63	28.6	500	515	530	568	-0.86
	Native Hawaiian/Pacific Islander	97	507.09	31.5	495	512	525	568	-0.70
	Black/African American	4,951	489.95	28.8	472	493	508	568	-0.85
	American Indian	73	498.88	29.1	479	506	515	568	-0.95
	White	32,902	505.55	26.0	492	508	520	568	-0.67
	Two or More Races	2,638	500.82	26.6	488	503	517	568	-0.72
Migrant	Non-Migrant	46,183	502.79	27.4	488	505	518	568	-0.75
	Migrant	226	486.11	32.4	470	491	508	561	-0.95
LEP	Non-LEP	43,143	504.29	26.5	492	506	520	568	-0.69
	LEP	3,266	481.82	30.8	463	485	503	568	-0.98
Economic Disadvantage	Economically Disadvantaged	28,775	497.51	27.5	483	501	515	568	-0.83
	Not Economically Disadvantaged	17,634	511.20	25.2	498	512	525	568	-0.66
IEP	Non-IEP	38,865	506.80	25.2	495	508	521	568	-0.73
	IEP	7,544	481.62	28.9	463	481	500	568	-0.60

Appendix I. Scale Score Descriptive Statistics

Grade 8 On-Demand Writing

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	45,935	496.79	34.6	477	498	521	579	-0.57
Gender	Female	22,297	503.38	33.2	487	506	525	579	-0.64
	Male	23,637	490.57	34.7	468	493	513	579	-0.52
Ethnicity	Hispanic	4,715	484.89	37.7	459	491	511	579	-0.56
	Asian	974	510.61	34.7	493	513	533	579	-0.82
	Native Hawaiian/Pacific Islander	97	490.90	33.8	481	495	510	558	-0.94
	Black/African American	5,041	477.90	34.0	453	481	498	579	-0.35
	American Indian	54	498.26	35.1	478	497	521	579	0.02
	White	32,688	501.14	32.9	484	504	524	579	-0.60
	Two or More Races	2,364	495.05	33.0	476	497	516	579	-0.45
Migrant	Non-Migrant	45,691	496.94	34.5	478	498	521	579	-0.57
	Migrant	244	467.94	42.3	451	471	499	561	-0.23
LEP	Non-LEP	43,118	499.05	33.2	481	501	521	579	-0.54
	LEP	2,817	462.07	36.7	451	465	488	570	-0.36
Economic Disadvantage	Economically Disadvantaged	27,147	489.62	34.6	467	493	513	579	-0.51
	Not Economically Disadvantaged	18,788	507.14	31.8	491	510	527	579	-0.69
IEP	Non-IEP	40,358	501.15	32.6	485	504	523	579	-0.63
	IEP	5,577	465.18	32.4	451	461	488	579	-0.25

Grade 11 On-Demand Writing

Category	Group	N	Mean	SD	P25	Median	P75	Max.	Skew
All	Students Tested	45,401	497.14	34.8	483	502	519	577	-0.78
Gender	Female	22,544	504.69	31.2	492	507	522	577	-0.83
	Male	22,852	489.68	36.5	471	496	513	577	-0.67
Ethnicity	Hispanic	4,488	488.25	37.3	465	496	513	577	-0.71
	Asian	908	510.92	31.8	496	512	528	577	-0.77
	Native Hawaiian/Pacific Islander	79	500.27	34.8	485	504	522	569	-0.81
	Black/African American	4,905	483.08	34.3	457	491	505	577	-0.59
	American Indian	56	494.39	30.0	481	501	515	557	-0.65
	White	32,901	500.19	33.9	488	504	521	577	-0.84
	Two or More Races	2,058	495.07	34.1	480	500	518	577	-0.75
Migrant	Non-Migrant	45,240	497.22	34.8	483	502	519	577	-0.78
	Migrant	161	473.52	39.5	446	481	503	553	-0.42
LEP	Non-LEP	43,282	498.77	34.0	485	503	520	577	-0.81
	LEP	2,119	463.86	34.5	446	465	492	577	-0.47
Economic Disadvantage	Economically Disadvantaged	24,494	490.35	34.6	471	496	513	577	-0.73
	Not Economically Disadvantaged	20,907	505.09	33.3	492	508	524	577	-0.92
IEP	Non-IEP	40,955	500.63	33.2	488	504	521	577	-0.89
	IEP	4,446	465.02	32.6	446	463	489	577	-0.27

Appendix J. Performance Level Rates

Grade 3 Reading

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	49,356	24.8%	28.0%	27.8%	19.4%
Gender	Female	24,083	23.4%	27.8%	28.3%	20.5%
	Male	25,273	26.2%	28.1%	27.3%	18.4%
Ethnicity	Hispanic	4,994	34.4%	31.4%	23.4%	10.9%
	Asian	1,058	15.8%	25.3%	31.9%	27.0%
	Native Hawaiian/Pacific Islander	113	35.4%	28.3%	24.8%	11.5%
	Black/African American	5,049	42.4%	30.7%	19.4%	7.5%
	American Indian	63	22.2%	34.9%	31.7%	11.1%
	White	35,137	21.1%	27.0%	29.4%	22.4%
	Two or More Races	2,942	25.4%	29.6%	28.7%	16.3%
Migrant	Non-Migrant	49,057	24.7%	28.0%	27.9%	19.5%
	Migrant	299	42.8%	30.4%	20.1%	6.7%
LEP	Non-LEP	44,599	23.1%	27.4%	28.5%	20.9%
	LEP	4,757	40.7%	33.5%	20.8%	5.0%
Economic Disadvantage	Economically Disadvantaged	31,696	30.0%	30.6%	25.6%	13.9%
	Not Economically Disadvantaged	17,660	15.5%	23.4%	31.8%	29.3%
IEP	Non-IEP	40,323	21.9%	27.7%	29.5%	20.9%
	IEP	9,033	38.0%	29.2%	20.2%	12.6%

Grade 4 Reading

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,410	23.2%	26.9%	31.8%	18.1%
Gender	Female	22,770	22.2%	26.7%	31.9%	19.2%
	Male	23,639	24.1%	27.0%	31.7%	17.2%
Ethnicity	Hispanic	4,695	35.5%	30.8%	24.2%	9.5%
	Asian	1,026	15.0%	24.4%	36.1%	24.6%
	Native Hawaiian/Pacific Islander	77	26.0%	28.6%	29.9%	15.6%
	Black/African American	4,937	41.6%	29.2%	22.4%	6.8%
	American Indian	43	25.6%	18.6%	32.6%	23.3%
	White	32,945	18.8%	26.0%	34.2%	21.1%
	Two or More Races	2,685	25.5%	27.7%	31.0%	15.8%
Migrant	Non-Migrant	46,160	23.1%	26.9%	31.9%	18.2%
	Migrant	250	48.4%	28.4%	16.8%	6.4%
LEP	Non-LEP	42,249	21.1%	26.1%	33.2%	19.7%
	LEP	4,161	44.9%	34.5%	17.8%	2.8%
Economic Disadvantage	Economically Disadvantaged	29,021	29.1%	29.9%	28.8%	12.2%
	Not Economically Disadvantaged	17,389	13.3%	21.9%	36.7%	28.1%
IEP	Non-IEP	38,102	19.5%	26.3%	34.2%	19.9%
	IEP	8,308	40.1%	29.4%	20.6%	9.9%

Appendix J. Performance Level Rates

Grade 5 Reading

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	47,086	20.6%	28.6%	31.2%	19.6%
Gender	Female	22,910	18.5%	28.0%	32.1%	21.5%
	Male	24,176	22.6%	29.3%	30.4%	17.8%
Ethnicity	Hispanic	4,746	33.1%	32.1%	24.3%	10.6%
	Asian	1,047	14.4%	21.9%	33.0%	30.8%
	Native Hawaiian/Pacific Islander	97	27.8%	28.9%	30.9%	12.4%
	Black/African American	4,959	37.5%	32.5%	21.9%	8.1%
	American Indian	74	31.1%	24.3%	27.0%	17.6%
	White	33,507	16.4%	27.7%	33.5%	22.5%
	Two or More Races	2,656	21.7%	30.0%	31.0%	17.2%
Migrant	Non-Migrant	46,857	20.5%	28.6%	31.3%	19.7%
	Migrant	229	46.7%	31.9%	16.2%	5.2%
LEP	Non-LEP	43,795	18.1%	28.3%	32.7%	21.0%
	LEP	3,291	54.2%	33.1%	11.4%	1.3%
Economic Disadvantage	Economically Disadvantaged	29,231	26.2%	32.4%	28.2%	13.2%
	Not Economically Disadvantaged	17,855	11.4%	22.5%	36.1%	30.0%
IEP	Non-IEP	39,374	16.0%	28.3%	33.7%	21.9%
	IEP	7,712	43.8%	30.0%	18.5%	7.8%

Grade 6 Reading

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	47,092	20.5%	26.7%	29.5%	23.3%
Gender	Female	22,858	17.1%	26.2%	30.2%	26.5%
	Male	24,233	23.6%	27.2%	28.9%	20.3%
Ethnicity	Hispanic	4,677	31.8%	30.0%	24.2%	13.9%
	Asian	1,057	12.9%	18.1%	30.8%	38.2%
	Native Hawaiian/Pacific Islander	87	19.5%	25.3%	42.5%	12.6%
	Black/African American	5,006	37.5%	31.9%	21.0%	9.6%
	American Indian	65	21.5%	33.8%	29.2%	15.4%
	White	33,610	16.6%	25.5%	31.4%	26.5%
	Two or More Races	2,589	21.2%	29.2%	29.8%	19.8%
Migrant	Non-Migrant	46,830	20.3%	26.7%	29.6%	23.4%
	Migrant	262	48.9%	25.2%	18.3%	7.6%
LEP	Non-LEP	44,444	18.2%	26.4%	30.8%	24.6%
	LEP	2,648	59.4%	30.9%	8.5%	1.2%
Economic Disadvantage	Economically Disadvantaged	28,773	26.1%	30.1%	27.5%	16.3%
	Not Economically Disadvantaged	18,319	11.6%	21.4%	32.7%	34.3%
IEP	Non-IEP	40,206	15.9%	26.2%	31.8%	26.1%
	IEP	6,886	47.0%	29.7%	16.4%	7.0%

Appendix J. Performance Level Rates

Grade 7 Reading

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	43,676	27.3%	24.2%	30.3%	18.3%
Gender	Female	21,068	23.0%	24.2%	32.8%	20.0%
	Male	22,608	31.2%	24.1%	27.8%	16.8%
Ethnicity	Hispanic	4,327	40.7%	24.6%	24.5%	10.2%
	Asian	1,029	15.0%	20.2%	29.5%	35.3%
	Native Hawaiian/Pacific Islander	86	26.7%	25.6%	31.4%	16.3%
	Black/African American	4,448	44.7%	27.4%	20.4%	7.5%
	American Indian	50	30.0%	32.0%	30.0%	8.0%
	White	31,389	23.4%	23.5%	32.5%	20.6%
	Two or More Races	2,347	26.3%	27.5%	30.4%	15.8%
Migrant	Non-Migrant	43,443	27.1%	24.1%	30.3%	18.4%
	Migrant	233	48.5%	27.5%	19.3%	4.7%
LEP	Non-LEP	41,054	24.6%	24.2%	31.7%	19.4%
	LEP	2,622	68.2%	23.2%	7.8%	0.9%
Economic Disadvantage	Economically Disadvantaged	26,069	34.2%	26.9%	27.4%	11.5%
	Not Economically Disadvantaged	17,607	17.0%	20.0%	34.5%	28.5%
IEP	Non-IEP	37,967	22.6%	24.3%	32.7%	20.3%
	IEP	5,709	58.0%	23.0%	14.0%	5.0%

Grade 8 Reading

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,652	37.1%	20.6%	24.3%	18.0%
Gender	Female	22,625	30.8%	21.2%	26.2%	21.7%
	Male	24,026	43.1%	19.9%	22.5%	14.5%
Ethnicity	Hispanic	4,750	50.1%	20.7%	18.9%	10.4%
	Asian	987	23.0%	16.5%	27.5%	33.0%
	Native Hawaiian/Pacific Islander	99	43.4%	26.3%	22.2%	8.1%
	Black/African American	5,076	59.0%	18.8%	15.1%	7.1%
	American Indian	54	35.2%	27.8%	22.2%	14.8%
	White	33,301	32.1%	20.8%	26.6%	20.5%
	Two or More Races	2,383	40.3%	22.3%	21.9%	15.5%
Migrant	Non-Migrant	46,406	37.0%	20.6%	24.4%	18.1%
	Migrant	246	64.2%	19.1%	12.6%	4.1%
LEP	Non-LEP	43,807	34.4%	20.9%	25.6%	19.1%
	LEP	2,845	78.9%	15.3%	5.3%	0.5%
Economic Disadvantage	Economically Disadvantaged	27,645	45.8%	21.4%	21.2%	11.6%
	Not Economically Disadvantaged	19,007	24.4%	19.4%	28.9%	27.2%
IEP	Non-IEP	40,936	32.3%	21.3%	26.4%	20.0%
	IEP	5,716	71.9%	15.2%	9.2%	3.6%

Grade 10 Reading

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	48,630	26.1%	26.6%	31.0%	16.3%
Gender	Female	23,750	20.3%	26.2%	34.5%	19.1%
	Male	24,879	31.7%	27.0%	27.6%	13.6%
Ethnicity	Hispanic	4,905	38.1%	27.3%	25.5%	9.0%
	Asian	940	15.4%	20.3%	30.7%	33.5%
	Native Hawaiian/Pacific Islander	82	23.2%	39.0%	24.4%	13.4%
	Black/African American	5,425	43.4%	29.7%	20.5%	6.4%
	American Indian	72	20.8%	25.0%	41.7%	12.5%
	White	34,827	22.0%	26.0%	33.4%	18.5%
	Two or More Races	2,378	26.5%	28.5%	29.9%	15.1%
Migrant	Non-Migrant	48,383	26.0%	26.6%	31.1%	16.4%
	Migrant	247	58.7%	27.5%	10.9%	2.8%
LEP	Non-LEP	45,891	23.5%	26.7%	32.5%	17.2%
	LEP	2,739	69.4%	24.8%	5.3%	0.5%
Economic Disadvantage	Economically Disadvantaged	27,655	33.3%	29.3%	27.3%	10.1%
	Not Economically Disadvantaged	20,975	16.7%	23.1%	35.8%	24.4%
IEP	Non-IEP	43,396	22.3%	26.5%	33.2%	17.9%
	IEP	5,234	58.0%	27.1%	12.1%	2.7%

Grade 3 Mathematics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	49,350	24.6%	32.0%	31.1%	12.3%
Gender	Female	24,085	26.4%	33.6%	30.0%	10.0%
	Male	25,265	22.8%	30.5%	32.1%	14.6%
Ethnicity	Hispanic	4,999	34.8%	34.4%	25.0%	5.8%
	Asian	1,062	13.8%	23.3%	35.0%	27.9%
	Native Hawaiian/Pacific Islander	113	32.7%	35.4%	22.1%	9.7%
	Black/African American	5,047	44.7%	33.0%	18.4%	3.9%
	American Indian	63	28.6%	31.7%	25.4%	14.3%
	White	35,124	20.3%	31.8%	33.7%	14.2%
	Two or More Races	2,942	27.2%	32.6%	29.9%	10.3%
Migrant	Non-Migrant	49,050	24.5%	32.0%	31.1%	12.4%
	Migrant	300	43.0%	34.3%	20.7%	2.0%
LEP	Non-LEP	44,585	22.9%	31.7%	32.1%	13.2%
	LEP	4,765	40.1%	35.0%	20.8%	4.1%
Economic Disadvantage	Economically Disadvantaged	31,684	30.6%	34.6%	27.0%	7.8%
	Not Economically Disadvantaged	17,666	13.7%	27.4%	38.3%	20.5%
IEP	Non-IEP	40,326	20.3%	32.6%	33.7%	13.4%
	IEP	9,024	43.8%	29.6%	19.2%	7.4%

Grade 4 Mathematics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,412	29.6%	25.8%	32.1%	12.5%
Gender	Female	22,770	31.8%	27.2%	30.5%	10.4%
	Male	23,641	27.4%	24.5%	33.6%	14.5%
Ethnicity	Hispanic	4,704	42.3%	27.0%	23.7%	7.0%
	Asian	1,033	17.7%	18.4%	33.8%	30.1%
	Native Hawaiian/Pacific Islander	77	33.8%	28.6%	27.3%	10.4%
	Black/African American	4,936	53.0%	24.9%	18.3%	3.7%
	American Indian	43	32.6%	23.3%	27.9%	16.3%
	White	32,933	24.4%	25.8%	35.5%	14.3%
	Two or More Races	2,684	32.2%	28.2%	29.4%	10.1%
Migrant	Non-Migrant	46,161	29.5%	25.8%	32.1%	12.6%
	Migrant	251	53.0%	25.1%	18.3%	3.6%
LEP	Non-LEP	42,235	27.3%	25.7%	33.5%	13.4%
	LEP	4,177	52.3%	26.9%	17.7%	3.0%
Economic Disadvantage	Economically Disadvantaged	29,018	37.1%	27.5%	27.9%	7.5%
	Not Economically Disadvantaged	17,394	17.0%	23.0%	39.1%	20.8%
IEP	Non-IEP	38,107	24.3%	26.8%	34.9%	14.0%
	IEP	8,305	53.7%	21.6%	18.9%	5.8%

Grade 5 Mathematics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	47,090	25.8%	30.6%	31.7%	11.8%
Gender	Female	22,915	26.5%	32.4%	30.8%	10.3%
	Male	24,175	25.2%	28.9%	32.6%	13.2%
Ethnicity	Hispanic	4,753	38.0%	31.0%	24.6%	6.4%
	Asian	1,049	14.1%	21.8%	36.0%	28.0%
	Native Hawaiian/Pacific Islander	97	24.7%	35.1%	33.0%	7.2%
	Black/African American	4,958	48.4%	31.3%	16.9%	3.3%
	American Indian	74	33.8%	21.6%	31.1%	13.5%
	White	33,503	20.9%	30.5%	35.1%	13.5%
	Two or More Races	2,656	28.2%	33.8%	28.7%	9.2%
Migrant	Non-Migrant	46,860	25.7%	30.6%	31.8%	11.8%
	Migrant	230	49.1%	32.6%	14.8%	3.5%
LEP	Non-LEP	43,787	23.5%	30.7%	33.3%	12.6%
	LEP	3,303	57.0%	29.6%	11.7%	1.7%
Economic Disadvantage	Economically Disadvantaged	29,231	32.9%	33.3%	26.8%	7.0%
	Not Economically Disadvantaged	17,859	14.3%	26.1%	39.8%	19.7%
IEP	Non-IEP	39,380	20.8%	31.5%	34.6%	13.2%
	IEP	7,710	51.9%	26.1%	17.2%	4.9%

Grade 6 Mathematics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	47,061	28.2%	30.6%	28.5%	12.7%
Gender	Female	22,844	28.3%	32.0%	28.4%	11.3%
	Male	24,216	28.0%	29.3%	28.6%	14.1%
Ethnicity	Hispanic	4,682	41.5%	32.3%	20.2%	6.0%
	Asian	1,055	14.8%	20.5%	32.2%	32.5%
	Native Hawaiian/Pacific Islander	87	32.2%	27.6%	34.5%	5.7%
	Black/African American	5,005	50.8%	31.6%	14.6%	3.0%
	American Indian	64	34.4%	35.9%	18.8%	10.9%
	White	33,582	23.1%	30.2%	31.8%	14.8%
	Two or More Races	2,585	30.7%	34.4%	25.3%	9.5%
Migrant	Non-Migrant	46,799	28.0%	30.6%	28.6%	12.8%
	Migrant	262	50.0%	31.3%	14.9%	3.8%
LEP	Non-LEP	44,409	25.8%	30.9%	29.8%	13.5%
	LEP	2,652	67.0%	26.1%	6.1%	0.8%
Economic Disadvantage	Economically Disadvantaged	28,747	35.6%	33.4%	23.9%	7.2%
	Not Economically Disadvantaged	18,314	16.5%	26.2%	35.8%	21.5%
IEP	Non-IEP	40,184	23.4%	31.2%	31.3%	14.1%
	IEP	6,877	55.7%	26.9%	12.4%	5.0%

Grade 7 Mathematics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	43,663	29.1%	27.6%	30.2%	13.1%
Gender	Female	21,066	29.7%	28.2%	30.5%	11.7%
	Male	22,597	28.6%	27.1%	29.9%	14.4%
Ethnicity	Hispanic	4,329	38.0%	31.6%	24.0%	6.4%
	Asian	1,032	16.3%	19.0%	30.3%	34.4%
	Native Hawaiian/Pacific Islander	87	33.3%	28.7%	24.1%	13.8%
	Black/African American	4,446	48.3%	31.2%	17.5%	3.1%
	American Indian	50	28.0%	36.0%	28.0%	8.0%
	White	31,375	25.3%	26.8%	32.9%	14.9%
	Two or More Races	2,344	33.5%	27.7%	28.8%	10.1%
Migrant	Non-Migrant	43,429	29.0%	27.6%	30.2%	13.1%
	Migrant	234	44.9%	31.2%	21.4%	2.6%
LEP	Non-LEP	41,030	27.5%	27.3%	31.4%	13.8%
	LEP	2,633	54.8%	32.9%	10.9%	1.3%
Economic Disadvantage	Economically Disadvantaged	26,060	36.5%	30.4%	25.9%	7.2%
	Not Economically Disadvantaged	17,603	18.2%	23.5%	36.6%	21.7%
IEP	Non-IEP	37,960	26.6%	26.8%	32.3%	14.3%
	IEP	5,703	45.9%	33.4%	16.1%	4.6%

Grade 8 Mathematics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,633	33.2%	26.5%	28.5%	11.8%
Gender	Female	22,611	31.9%	27.0%	29.7%	11.4%
	Male	24,021	34.3%	26.1%	27.4%	12.2%
Ethnicity	Hispanic	4,749	43.5%	27.5%	22.9%	6.1%
	Asian	987	15.2%	19.3%	32.8%	32.7%
	Native Hawaiian/Pacific Islander	99	34.3%	37.4%	23.2%	5.1%
	Black/African American	5,074	51.9%	28.5%	16.5%	3.1%
	American Indian	54	35.2%	33.3%	20.4%	11.1%
	White	33,287	29.1%	26.1%	31.3%	13.5%
	Two or More Races	2,381	36.7%	28.6%	25.2%	9.5%
Migrant	Non-Migrant	46,386	33.0%	26.5%	28.6%	11.9%
	Migrant	247	56.3%	27.5%	12.1%	4.0%
LEP	Non-LEP	43,785	31.3%	26.4%	29.8%	12.5%
	LEP	2,848	61.5%	28.2%	9.3%	1.1%
Economic Disadvantage	Economically Disadvantaged	27,631	40.8%	28.9%	23.7%	6.5%
	Not Economically Disadvantaged	19,002	22.0%	23.0%	35.5%	19.5%
IEP	Non-IEP	40,924	29.8%	26.3%	30.9%	13.0%
	IEP	5,709	57.2%	28.2%	11.3%	3.2%

Grade 10 Mathematics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	48,531	29.8%	29.0%	28.8%	12.4%
Gender	Female	23,704	27.7%	29.7%	31.1%	11.5%
	Male	24,826	31.8%	28.4%	26.5%	13.3%
Ethnicity	Hispanic	4,892	39.1%	32.8%	22.1%	6.0%
	Asian	941	16.3%	18.2%	28.1%	37.5%
	Native Hawaiian/Pacific Islander	82	32.9%	29.3%	28.0%	9.8%
	Black/African American	5,394	48.3%	31.6%	16.4%	3.8%
	American Indian	73	26.0%	34.2%	28.8%	11.0%
	White	34,778	25.9%	28.2%	31.7%	14.2%
	Two or More Races	2,370	31.5%	31.8%	27.3%	9.4%
Migrant	Non-Migrant	48,282	29.7%	29.0%	28.8%	12.5%
	Migrant	249	54.6%	30.1%	13.3%	2.0%
LEP	Non-LEP	45,807	27.9%	28.9%	30.1%	13.1%
	LEP	2,724	61.5%	30.2%	6.9%	1.3%
Economic Disadvantage	Economically Disadvantaged	27,571	37.4%	32.6%	23.5%	6.5%
	Not Economically Disadvantaged	20,960	19.8%	24.3%	35.7%	20.3%
IEP	Non-IEP	43,328	26.4%	29.0%	31.0%	13.7%
	IEP	5,203	58.5%	29.1%	10.3%	2.1%

Grade 4 Science

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,403	9.2%	53.5%	29.0%	8.2%
Gender	Female	22,765	8.9%	55.3%	28.5%	7.4%
	Male	23,637	9.6%	51.7%	29.6%	9.1%
Ethnicity	Hispanic	4,701	15.3%	61.5%	19.6%	3.7%
	Asian	1,033	6.0%	47.1%	32.7%	14.1%
	Native Hawaiian/Pacific Islander	77	18.2%	54.5%	24.7%	2.6%
	Black/African American	4,935	20.8%	62.8%	14.4%	2.0%
	American Indian	43	9.3%	55.8%	23.3%	11.6%
	White	32,928	6.7%	50.9%	32.6%	9.9%
	Two or More Races	2,684	10.2%	56.5%	27.4%	5.9%
Migrant	Non-Migrant	46,152	9.2%	53.4%	29.1%	8.3%
	Migrant	251	21.9%	60.2%	16.3%	1.6%
LEP	Non-LEP	42,229	8.2%	52.0%	30.8%	9.0%
	LEP	4,174	19.9%	67.9%	11.3%	0.9%
Economic Disadvantage	Economically Disadvantaged	29,014	11.8%	59.2%	23.9%	5.1%
	Not Economically Disadvantaged	17,389	4.9%	43.9%	37.7%	13.5%
IEP	Non-IEP	38,098	7.5%	52.4%	31.3%	8.8%
	IEP	8,305	17.3%	58.2%	18.6%	5.9%

Grade 7 Science

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	43,614	27.8%	43.3%	25.2%	3.7%
Gender	Female	21,044	26.8%	46.2%	24.2%	2.8%
	Male	22,570	28.7%	40.7%	26.1%	4.5%
Ethnicity	Hispanic	4,327	41.1%	41.8%	15.8%	1.3%
	Asian	1,031	16.3%	36.3%	37.1%	10.4%
	Native Hawaiian/Pacific Islander	87	35.6%	40.2%	21.8%	2.3%
	Black/African American	4,439	46.7%	42.4%	10.6%	0.4%
	American Indian	50	28.0%	50.0%	18.0%	4.0%
	White	31,337	23.5%	43.8%	28.4%	4.3%
	Two or More Races	2,343	28.8%	45.5%	22.4%	3.3%
Migrant	Non-Migrant	43,380	27.6%	43.4%	25.3%	3.7%
	Migrant	234	51.7%	37.6%	10.3%	0.4%
LEP	Non-LEP	40,983	25.4%	44.0%	26.6%	3.9%
	LEP	2,631	64.1%	32.8%	3.1%	0.0%
Economic Disadvantage	Economically Disadvantaged	26,015	34.9%	45.2%	18.1%	1.8%
	Not Economically Disadvantaged	17,599	17.2%	40.6%	35.6%	6.6%
IEP	Non-IEP	37,922	23.7%	44.6%	27.6%	4.1%
	IEP	5,692	55.2%	34.7%	9.3%	0.8%

Grade 11 Science

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,322	47.5%	30.9%	18.9%	2.7%
Gender	Female	22,953	44.6%	33.8%	19.2%	2.3%
	Male	23,364	50.3%	28.1%	18.5%	3.2%
Ethnicity	Hispanic	4,567	59.6%	27.7%	11.5%	1.2%
	Asian	917	29.9%	28.9%	30.8%	10.5%
	Native Hawaiian/Pacific Islander	84	47.6%	36.9%	14.3%	1.2%
	Black/African American	5,001	70.8%	22.6%	6.1%	0.5%
	American Indian	57	54.4%	28.1%	14.0%	3.5%
	White	33,612	42.7%	32.6%	21.6%	3.1%
	Two or More Races	2,078	49.4%	31.5%	16.8%	2.3%
Migrant	Non-Migrant	46,159	47.4%	30.9%	18.9%	2.8%
	Migrant	163	73.0%	20.9%	6.1%	0.0%
LEP	Non-LEP	44,157	45.4%	31.9%	19.8%	2.9%
	LEP	2,165	88.7%	10.3%	0.9%	0.1%
Economic Disadvantage	Economically Disadvantaged	25,065	57.5%	28.4%	12.9%	1.2%
	Not Economically Disadvantaged	21,257	35.6%	33.9%	25.9%	4.5%
IEP	Non-IEP	41,759	44.0%	32.5%	20.5%	3.0%
	IEP	4,563	79.1%	16.3%	4.2%	0.4%

Grade 5 Social Studies

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	47,034	34.1%	27.4%	23.7%	14.8%
Gender	Female	22,883	34.0%	28.6%	23.7%	13.7%
	Male	24,151	34.3%	26.2%	23.7%	15.8%
Ethnicity	Hispanic	4,741	47.1%	27.0%	18.1%	7.9%
	Asian	1,046	21.9%	24.7%	26.8%	26.7%
	Native Hawaiian/Pacific Islander	97	42.3%	26.8%	19.6%	11.3%
	Black/African American	4,957	56.3%	24.8%	14.1%	4.8%
	American Indian	74	41.9%	23.0%	20.3%	14.9%
	White	33,467	29.2%	27.7%	26.0%	17.1%
	Two or More Races	2,652	36.6%	29.9%	21.4%	12.2%
Migrant	Non-Migrant	46,805	34.0%	27.4%	23.8%	14.8%
	Migrant	229	60.7%	23.6%	10.5%	5.2%
LEP	Non-LEP	43,746	31.6%	27.6%	24.9%	15.8%
	LEP	3,288	67.7%	23.8%	7.4%	1.2%
Economic Disadvantage	Economically Disadvantaged	29,187	42.1%	28.1%	20.0%	9.8%
	Not Economically Disadvantaged	17,847	21.1%	26.1%	29.9%	22.9%
IEP	Non-IEP	39,335	29.8%	28.6%	25.7%	15.9%
	IEP	7,699	56.1%	21.3%	13.8%	8.8%

Grade 8 Social Studies

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,582	39.6%	21.3%	23.5%	15.6%
Gender	Female	22,592	37.2%	22.6%	24.3%	15.9%
	Male	23,989	41.8%	20.1%	22.7%	15.4%
Ethnicity	Hispanic	4,743	51.2%	19.7%	19.6%	9.4%
	Asian	987	21.6%	18.0%	30.3%	30.1%
	Native Hawaiian/Pacific Islander	99	44.4%	22.2%	22.2%	11.1%
	Black/African American	5,068	61.2%	19.3%	13.8%	5.6%
	American Indian	54	38.9%	22.2%	16.7%	22.2%
	White	33,251	34.9%	21.8%	25.5%	17.8%
	Two or More Races	2,378	43.3%	23.1%	21.4%	12.2%
Migrant	Non-Migrant	46,336	39.4%	21.4%	23.6%	15.7%
	Migrant	246	68.7%	16.3%	11.4%	3.7%
LEP	Non-LEP	43,741	37.1%	21.7%	24.6%	16.6%
	LEP	2,841	77.4%	15.3%	6.5%	0.8%
Economic Disadvantage	Economically Disadvantaged	27,591	48.8%	21.6%	19.8%	9.8%
	Not Economically Disadvantaged	18,991	26.2%	20.9%	28.9%	24.1%
IEP	Non-IEP	40,886	35.0%	22.3%	25.5%	17.2%
	IEP	5,696	72.4%	14.4%	9.2%	4.0%

Grade 11 Social Studies

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,231	37.8%	23.7%	23.2%	15.3%
Gender	Female	22,898	34.5%	26.0%	24.8%	14.8%
	Male	23,328	41.0%	21.6%	21.6%	15.8%
Ethnicity	Hispanic	4,548	47.4%	24.7%	19.2%	8.8%
	Asian	917	20.7%	19.3%	28.6%	31.4%
	Native Hawaiian/Pacific Islander	83	36.1%	27.7%	20.5%	15.7%
	Black/African American	4,980	59.2%	21.8%	13.7%	5.4%
	American Indian	57	45.6%	28.1%	19.3%	7.0%
	White	33,562	33.6%	23.8%	25.1%	17.4%
	Two or More Races	2,078	39.3%	26.2%	22.1%	12.4%
Migrant	Non-Migrant	46,067	37.6%	23.8%	23.2%	15.4%
	Migrant	164	69.5%	15.2%	11.6%	3.7%
LEP	Non-LEP	44,079	35.7%	24.1%	24.2%	16.0%
	LEP	2,152	80.3%	15.7%	3.4%	0.6%
Economic Disadvantage	Economically Disadvantaged	24,992	46.9%	24.6%	19.3%	9.2%
	Not Economically Disadvantaged	21,239	27.0%	22.7%	27.8%	22.6%
IEP	Non-IEP	41,683	33.6%	24.8%	24.9%	16.7%
	IEP	4,548	75.5%	14.1%	7.5%	3.0%

Grade 5 Editing and Mechanics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,435	24.4%	28.2%	23.4%	24.0%
Gender	Female	22,616	20.6%	27.4%	25.0%	27.0%
	Male	23,819	28.0%	28.9%	22.0%	21.1%
Ethnicity	Hispanic	4,714	38.6%	30.4%	17.8%	13.2%
	Asian	1,040	14.9%	24.2%	25.6%	35.3%
	Native Hawaiian/Pacific Islander	97	24.7%	34.0%	21.6%	19.6%
	Black/African American	4,952	44.3%	30.0%	16.0%	9.7%
	American Indian	73	28.8%	28.8%	13.7%	28.8%
	White	32,920	19.5%	27.5%	25.3%	27.6%
	Two or More Races	2,639	26.0%	30.4%	23.2%	20.5%
Migrant	Non-Migrant	46,208	24.3%	28.2%	23.5%	24.1%
	Migrant	227	52.4%	30.0%	11.9%	5.7%
LEP	Non-LEP	43,163	21.8%	28.1%	24.5%	25.6%
	LEP	3,272	58.3%	28.5%	9.8%	3.4%
Economic Disadvantage	Economically Disadvantaged	28,792	31.2%	30.6%	21.2%	17.0%
	Not Economically Disadvantaged	17,643	13.4%	24.2%	27.0%	35.4%
IEP	Non-IEP	38,887	19.2%	28.8%	25.4%	26.7%
	IEP	7,548	51.3%	24.9%	13.5%	10.3%

Grade 8 Editing and Mechanics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,007	25.5%	25.5%	32.0%	17.0%
Gender	Female	22,318	19.2%	24.8%	34.9%	21.1%
	Male	23,688	31.3%	26.2%	29.4%	13.1%
Ethnicity	Hispanic	4,727	37.7%	27.2%	26.1%	8.9%
	Asian	976	15.6%	20.4%	34.4%	29.6%
	Native Hawaiian/Pacific Islander	97	24.7%	38.1%	28.9%	8.2%
	Black/African American	5,052	42.8%	28.5%	22.2%	6.5%
	American Indian	54	27.8%	31.5%	25.9%	14.8%
	White	32,727	21.3%	24.6%	34.5%	19.6%
	Two or More Races	2,372	24.9%	29.7%	30.4%	15.0%
Migrant	Non-Migrant	45,761	25.3%	25.5%	32.1%	17.0%
	Migrant	246	58.1%	22.4%	15.4%	4.1%
LEP	Non-LEP	43,177	22.8%	25.6%	33.5%	18.0%
	LEP	2,830	66.1%	23.9%	9.2%	0.7%
Economic Disadvantage	Economically Disadvantaged	27,202	32.4%	27.9%	28.3%	11.4%
	Not Economically Disadvantaged	18,805	15.4%	22.1%	37.4%	25.1%
IEP	Non-IEP	40,407	20.6%	25.9%	34.7%	18.9%
	IEP	5,600	60.5%	23.0%	13.1%	3.4%

Grade 11 Editing and Mechanics

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	45,673	27.3%	31.7%	28.0%	13.0%
Gender	Female	22,644	21.7%	31.4%	31.6%	15.3%
	Male	23,024	32.9%	31.9%	24.5%	10.6%
Ethnicity	Hispanic	4,526	40.1%	33.5%	20.2%	6.2%
	Asian	911	17.9%	22.8%	34.9%	24.4%
	Native Hawaiian/Pacific Islander	79	24.1%	35.4%	26.6%	13.9%
	Black/African American	4,968	46.6%	34.2%	15.6%	3.6%
	American Indian	56	39.3%	32.1%	19.6%	8.9%
	White	33,057	23.0%	31.1%	30.7%	15.2%
	Two or More Races	2,070	26.5%	34.7%	28.8%	10.0%
Migrant	Non-Migrant	45,510	27.2%	31.7%	28.1%	13.0%
	Migrant	163	57.7%	30.7%	10.4%	1.2%
LEP	Non-LEP	43,528	24.9%	32.2%	29.3%	13.6%
	LEP	2,145	77.1%	20.2%	2.5%	0.2%
Economic Disadvantage	Economically Disadvantaged	24,675	34.9%	35.0%	22.7%	7.5%
	Not Economically Disadvantaged	20,998	18.5%	27.8%	34.3%	19.4%
IEP	Non-IEP	41,184	23.2%	32.5%	30.2%	14.1%
	IEP	4,489	65.4%	24.3%	8.0%	2.3%

Grade 5 On-Demand Writing

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	46,409	22.5%	39.0%	23.2%	15.3%
Gender	Female	22,607	17.5%	37.2%	25.9%	19.3%
	Male	23,802	27.2%	40.7%	20.6%	11.5%
Ethnicity	Hispanic	4,708	32.0%	39.1%	19.0%	9.9%
	Asian	1,040	13.3%	29.8%	26.7%	30.2%
	Native Hawaiian/Pacific Islander	97	20.6%	28.9%	27.8%	22.7%
	Black/African American	4,951	39.3%	39.5%	14.5%	6.7%
	American Indian	73	28.8%	32.9%	26.0%	12.3%
	White	32,902	18.8%	39.0%	25.2%	17.1%
	Two or More Races	2,638	23.6%	42.8%	20.8%	12.8%
Migrant	Non-Migrant	46,183	22.4%	39.0%	23.2%	15.4%
	Migrant	226	42.5%	37.2%	15.0%	5.3%
LEP	Non-LEP	43,143	20.3%	39.3%	24.2%	16.2%
	LEP	3,266	51.2%	35.4%	9.6%	3.8%
Economic Disadvantage	Economically Disadvantaged	28,775	28.6%	41.0%	19.9%	10.5%
	Not Economically Disadvantaged	17,634	12.5%	35.8%	28.6%	23.2%
IEP	Non-IEP	38,865	16.0%	40.5%	26.0%	17.5%
	IEP	7,544	55.6%	31.3%	9.0%	4.1%

Grade 8 On-Demand Writing

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	45,935	24.0%	26.9%	36.8%	12.3%
Gender	Female	22,297	17.6%	24.9%	41.1%	16.4%
	Male	23,637	29.9%	28.7%	32.8%	8.5%
Ethnicity	Hispanic	4,715	35.3%	28.1%	30.0%	6.6%
	Asian	974	13.1%	20.9%	40.3%	25.6%
	Native Hawaiian/Pacific Islander	97	20.6%	36.1%	37.1%	6.2%
	Black/African American	5,041	45.0%	30.2%	20.8%	4.1%
	American Indian	54	24.1%	33.3%	29.6%	13.0%
	White	32,688	19.3%	26.3%	40.2%	14.2%
	Two or More Races	2,364	25.5%	27.9%	36.1%	10.4%
Migrant	Non-Migrant	45,691	23.8%	26.9%	36.9%	12.4%
	Migrant	244	54.9%	19.7%	21.3%	4.1%
LEP	Non-LEP	43,118	21.7%	26.8%	38.5%	13.1%
	LEP	2,817	59.2%	28.1%	11.6%	1.1%
Economic Disadvantage	Economically Disadvantaged	27,147	30.7%	29.4%	31.7%	8.1%
	Not Economically Disadvantaged	18,788	14.2%	23.2%	44.2%	18.4%
IEP	Non-IEP	40,358	18.7%	27.2%	40.3%	13.9%
	IEP	5,577	62.2%	24.6%	11.9%	1.3%

Grade 11 On-Demand Writing

Category	Group	N	Novice	Apprentice	Proficient	Distinguished
All	Students Tested	45,401	18.3%	36.1%	35.7%	9.8%
Gender	Female	22,544	11.8%	33.2%	42.5%	12.6%
	Male	22,852	24.8%	39.0%	29.1%	7.1%
Ethnicity	Hispanic	4,488	26.6%	37.3%	29.9%	6.1%
	Asian	908	9.3%	27.8%	43.5%	19.5%
	Native Hawaiian/Pacific Islander	79	16.5%	35.4%	35.4%	12.7%
	Black/African American	4,905	31.2%	43.0%	22.2%	3.7%
	American Indian	56	19.6%	44.6%	30.4%	5.4%
	White	32,901	15.5%	34.9%	38.5%	11.1%
	Two or More Races	2,058	19.2%	39.0%	33.5%	8.3%
Migrant	Non-Migrant	45,240	18.3%	36.1%	35.8%	9.9%
	Migrant	161	41.6%	36.6%	16.8%	5.0%
LEP	Non-LEP	43,282	16.7%	36.0%	37.0%	10.3%
	LEP	2,119	51.9%	39.2%	8.6%	0.3%
Economic Disadvantage	Economically Disadvantaged	24,494	23.6%	40.0%	30.4%	6.0%
	Not Economically Disadvantaged	20,907	12.2%	31.5%	41.9%	14.4%
IEP	Non-IEP	40,955	14.5%	36.1%	38.6%	10.8%
	IEP	4,446	54.2%	35.7%	9.2%	0.9%

Appendix K. Reliability⁶

Grade 3 Reading

Category	Group	N	Reliability	SEM
All	Students Tested	49,345	0.86	6.16
Gender	Female	24,075	0.86	6.15
	Male	25,270	0.86	6.16
Ethnicity	Hispanic	4,993	0.85	5.88
	Asian	1,056	0.86	6.15
	Native Hawaiian/Pacific Islander	113	0.85	5.98
	Black/African American	5,049	0.84	5.91
	American Indian	63	0.85	5.98
	White	35,129	0.86	6.15
	Two or More Races	2,942	0.85	6.06
Migrant	Non-Migrant	49,046	0.86	6.16
	Migrant	299	0.82	5.96
LEP	Non-LEP	44,588	0.86	6.18
	LEP	4,757	0.81	5.82
Economic Disadvantage	Economically Disadvantaged	31,690	0.85	6.08
	Not Economically Disadvantaged	17,655	0.86	6.17
IEP	Non-IEP	40,315	0.86	6.07
	IEP	9,030	0.87	5.96

Grade 4 Reading

Category	Group	N	Reliability	SEM
All	Students Tested	46,408	0.86	6.00
Gender	Female	22,769	0.86	6.01
	Male	23,638	0.86	5.98
Ethnicity	Hispanic	4,695	0.85	5.85
	Asian	1,026	0.86	5.96
	Native Hawaiian/Pacific Islander	77	0.88	5.80
	Black/African American	4,937	0.85	5.76
	American Indian	43	0.90	6.12
	White	32,943	0.86	5.88
	Two or More Races	2,685	0.86	5.98
Migrant	Non-Migrant	46,158	0.86	6.00
	Migrant	250	0.83	5.84
LEP	Non-LEP	42,247	0.86	5.98
	LEP	4,161	0.79	5.81
Economic Disadvantage	Economically Disadvantaged	29,021	0.86	5.76
	Not Economically Disadvantaged	17,387	0.85	6.03
IEP	Non-IEP	38,100	0.86	5.88
	IEP	8,308	0.86	5.88

⁶ Students with '0' or perfect scores are excluded from calculation of reliability.

Grade 5 Reading

Category	Group	N	Reliability	SEM
All	Students Tested	47,081	0.87	6.37
Gender	Female	22,907	0.86	6.59
	Male	24,174	0.87	6.36
Ethnicity	Hispanic	4,746	0.87	6.14
	Asian	1,047	0.87	6.73
	Native Hawaiian/Pacific Islander	97	0.87	6.24
	Black/African American	4,959	0.86	6.20
	American Indian	74	0.89	6.37
	White	33,502	0.86	6.45
	Two or More Races	2,656	0.86	6.40
Migrant	Non-Migrant	46,852	0.87	6.36
	Migrant	229	0.87	6.22
LEP	Non-LEP	43,790	0.86	6.49
	LEP	3,291	0.79	6.13
Economic Disadvantage	Economically Disadvantaged	29,231	0.86	6.32
	Not Economically Disadvantaged	17,850	0.85	6.63
IEP	Non-IEP	39,369	0.85	6.58
	IEP	7,712	0.87	6.18

Grade 6 Reading

Category	Group	N	Reliability	SEM
All	Students Tested	47,081	0.86	6.44
Gender	Female	22,850	0.85	6.61
	Male	24,230	0.86	6.43
Ethnicity	Hispanic	4,677	0.86	6.25
	Asian	1,057	0.85	6.83
	Native Hawaiian/Pacific Islander	87	0.81	6.21
	Black/African American	5,005	0.85	6.12
	American Indian	65	0.81	6.22
	White	33,600	0.85	6.54
	Two or More Races	2,589	0.85	6.46
Migrant	Non-Migrant	46,819	0.86	6.44
	Migrant	262	0.85	6.31
LEP	Non-LEP	44,433	0.85	6.56
	LEP	2,648	0.74	6.11
Economic Disadvantage	Economically Disadvantaged	28,768	0.85	6.36
	Not Economically Disadvantaged	18,313	0.84	6.75
IEP	Non-IEP	40,195	0.85	6.48
	IEP	6,886	0.83	6.26

Grade 7 Reading

Category	Group	N	Reliability	SEM
All	Students Tested	43,675	0.85	5.98
Gender	Female	21,067	0.85	5.86
	Male	22,608	0.85	6.04
Ethnicity	Hispanic	4,327	0.84	5.98
	Asian	1,028	0.86	6.12
	Native Hawaiian/Pacific Islander	86	0.82	5.85
	Black/African American	4,448	0.82	5.94
	American Indian	50	0.79	5.79
	White	31,389	0.85	5.89
	Two or More Races	2,347	0.84	5.85
Migrant	Non-Migrant	43,442	0.85	5.98
	Migrant	233	0.81	5.92
LEP	Non-LEP	41,053	0.85	5.90
	LEP	2,622	0.69	5.95
Economic Disadvantage	Economically Disadvantaged	26,069	0.84	5.81
	Not Economically Disadvantaged	17,606	0.84	6.12
IEP	Non-IEP	37,966	0.84	6.01
	IEP	5,709	0.80	5.99

Grade 8 Reading

Category	Group	N	Reliability	SEM
All	Students Tested	46,652	0.86	6.33
Gender	Female	22,625	0.86	6.27
	Male	24,026	0.86	6.25
Ethnicity	Hispanic	4,750	0.85	6.27
	Asian	987	0.86	6.66
	Native Hawaiian/Pacific Islander	99	0.84	6.06
	Black/African American	5,076	0.84	6.07
	American Indian	54	0.87	6.26
	White	33,301	0.86	6.24
	Two or More Races	2,383	0.85	6.28
Migrant	Non-Migrant	46,406	0.86	6.32
	Migrant	246	0.83	6.18
LEP	Non-LEP	43,807	0.86	6.24
	LEP	2,845	0.71	6.19
Economic Disadvantage	Economically Disadvantaged	27,645	0.85	6.18
	Not Economically Disadvantaged	19,007	0.85	6.48
IEP	Non-IEP	40,936	0.86	6.19
	IEP	5,716	0.80	6.14

Grade 10 Reading

Category	Group	N	Reliability	SEM
All	Students Tested	48,626	0.86	6.00
Gender	Female	23,750	0.86	5.86
	Male	24,875	0.86	6.02
Ethnicity	Hispanic	4,905	0.85	5.92
	Asian	940	0.88	6.15
	Native Hawaiian/Pacific Islander	82	0.86	5.96
	Black/African American	5,422	0.83	5.96
	American Indian	72	0.86	5.97
	White	34,826	0.86	5.92
	Two or More Races	2,378	0.86	5.82
Migrant	Non-Migrant	48,379	0.86	6.00
	Migrant	247	0.76	6.17
LEP	Non-LEP	45,888	0.86	5.93
	LEP	2,738	0.60	6.25
Economic Disadvantage	Economically Disadvantaged	27,651	0.84	5.95
	Not Economically Disadvantaged	20,975	0.86	6.06
IEP	Non-IEP	43,394	0.86	5.92
	IEP	5,232	0.76	6.06

Grade 3 Mathematics

Category	Group	N	Reliability	SEM
All	Students Tested	49,184	0.88	6.63
Gender	Female	24,029	0.87	6.61
	Male	25,155	0.88	6.84
Ethnicity	Hispanic	4,994	0.86	6.43
	Asian	1,054	0.88	7.48
	Native Hawaiian/Pacific Islander	113	0.88	6.33
	Black/African American	5,043	0.85	6.42
	American Indian	63	0.89	7.04
	White	34,982	0.87	6.85
	Two or More Races	2,935	0.87	6.66
Migrant	Non-Migrant	48,884	0.88	6.63
	Migrant	300	0.84	6.32
LEP	Non-LEP	44,422	0.88	6.64
	LEP	4,762	0.85	6.38
Economic Disadvantage	Economically Disadvantaged	31,636	0.87	6.42
	Not Economically Disadvantaged	17,548	0.87	7.02
IEP	Non-IEP	40,188	0.87	6.74
	IEP	8,996	0.88	6.54

Grade 4 Mathematics

Category	Group	N	Reliability	SEM
All	Students Tested	46,306	0.89	6.63
Gender	Female	22,724	0.88	6.73
	Male	23,581	0.89	6.76
Ethnicity	Hispanic	4,698	0.88	6.55
	Asian	1,022	0.89	7.47
	Native Hawaiian/Pacific Islander	77	0.89	6.48
	Black/African American	4,932	0.86	6.68
	American Indian	43	0.89	6.68
	White	32,851	0.88	6.76
	Two or More Races	2,681	0.88	6.70
Migrant	Non-Migrant	46,055	0.89	6.63
	Migrant	251	0.86	6.72
LEP	Non-LEP	42,130	0.88	6.89
	LEP	4,176	0.85	6.66
Economic Disadvantage	Economically Disadvantaged	28,995	0.88	6.50
	Not Economically Disadvantaged	17,311	0.88	6.87
IEP	Non-IEP	38,008	0.88	6.71
	IEP	8,298	0.88	6.69

Grade 5 Mathematics

Category	Group	N	Reliability	SEM
All	Students Tested	46,810	0.88	6.62
Gender	Female	22,807	0.88	6.42
	Male	24,003	0.89	6.51
Ethnicity	Hispanic	4,744	0.88	6.30
	Asian	1,014	0.87	7.50
	Native Hawaiian/Pacific Islander	96	0.87	6.07
	Black/African American	4,953	0.85	6.30
	American Indian	74	0.90	6.80
	White	33,295	0.88	6.53
	Two or More Races	2,634	0.87	6.51
Migrant	Non-Migrant	46,580	0.88	6.62
	Migrant	230	0.86	6.50
LEP	Non-LEP	43,507	0.88	6.58
	LEP	3,303	0.82	6.28
Economic Disadvantage	Economically Disadvantaged	29,163	0.87	6.39
	Not Economically Disadvantaged	17,647	0.87	6.92
IEP	Non-IEP	39,115	0.88	6.47
	IEP	7,695	0.87	6.42

Grade 6 Mathematics

Category	Group	N	Reliability	SEM
All	Students Tested	46,999	0.87	6.11
Gender	Female	22,828	0.86	6.12
	Male	24,170	0.87	6.31
Ethnicity	Hispanic	4,679	0.83	6.16
	Asian	1,043	0.88	7.04
	Native Hawaiian/Pacific Islander	87	0.82	6.08
	Black/African American	5,004	0.78	6.25
	American Indian	64	0.85	6.22
	White	33,541	0.87	6.09
	Two or More Races	2,580	0.85	6.17
Migrant	Non-Migrant	46,737	0.87	6.11
	Migrant	262	0.80	6.33
LEP	Non-LEP	44,347	0.86	6.32
	LEP	2,652	0.64	6.49
Economic Disadvantage	Economically Disadvantaged	28,737	0.84	6.07
	Not Economically Disadvantaged	18,262	0.87	6.37
IEP	Non-IEP	40,122	0.86	6.25
	IEP	6,877	0.81	6.49

Grade 7 Mathematics

Category	Group	N	Reliability	SEM
All	Students Tested	43,651	0.82	6.30
Gender	Female	21,061	0.81	6.25
	Male	22,590	0.83	6.31
Ethnicity	Hispanic	4,329	0.75	6.37
	Asian	1,025	0.89	6.70
	Native Hawaiian/Pacific Islander	87	0.80	6.24
	Black/African American	4,445	0.65	6.48
	American Indian	50	0.76	6.22
	White	31,371	0.83	6.15
	Two or More Races	2,344	0.80	6.30
Migrant	Non-Migrant	43,417	0.82	6.31
	Migrant	234	0.68	6.65
LEP	Non-LEP	41,019	0.82	6.33
	LEP	2,632	0.50	6.70
Economic Disadvantage	Economically Disadvantaged	26,055	0.76	6.30
	Not Economically Disadvantaged	17,596	0.85	6.20
IEP	Non-IEP	37,950	0.83	6.18
	IEP	5,701	0.70	6.52

Grade 8 Mathematics

Category	Group	N	Reliability	SEM
All	Students Tested	46,590	0.84	6.33
Gender	Female	22,596	0.84	6.20
	Male	23,993	0.85	6.24
Ethnicity	Hispanic	4,746	0.78	6.32
	Asian	975	0.89	6.72
	Native Hawaiian/Pacific Islander	99	0.79	6.31
	Black/African American	5,074	0.70	6.43
	American Indian	54	0.85	6.42
	White	33,259	0.85	6.20
	Two or More Races	2,381	0.83	6.28
Migrant	Non-Migrant	46,343	0.84	6.33
	Migrant	247	0.72	6.54
LEP	Non-LEP	43,742	0.84	6.37
	LEP	2,848	0.55	6.54
Economic Disadvantage	Economically Disadvantaged	27,625	0.79	6.29
	Not Economically Disadvantaged	18,965	0.86	6.40
IEP	Non-IEP	40,881	0.85	6.20
	IEP	5,709	0.69	6.43

Grade 10 Mathematics

Category	Group	N	Reliability	SEM
All	Students Tested	48,512	0.83	6.43
Gender	Female	23,696	0.82	6.25
	Male	24,815	0.85	6.35
Ethnicity	Hispanic	4,890	0.77	6.50
	Asian	934	0.90	7.27
	Native Hawaiian/Pacific Islander	82	0.85	6.68
	Black/African American	5,391	0.71	6.53
	American Indian	73	0.89	6.84
	White	34,771	0.84	6.22
	Two or More Races	2,370	0.82	6.27
Migrant	Non-Migrant	48,263	0.84	6.24
	Migrant	249	0.68	6.65
LEP	Non-LEP	45,789	0.84	6.25
	LEP	2,723	0.54	6.73
Economic Disadvantage	Economically Disadvantaged	27,565	0.77	6.41
	Not Economically Disadvantaged	20,947	0.86	6.28
IEP	Non-IEP	43,311	0.84	6.27
	IEP	5,201	0.60	6.72

Grade 4 Science

Category	Group	N	Reliability	SEM
All	Students Tested	46,399	0.81	6.56
Gender	Female	22,763	0.80	6.54
	Male	23,635	0.82	6.55
Ethnicity	Hispanic	4,700	0.79	6.49
	Asian	1,033	0.84	6.54
	Native Hawaiian/Pacific Islander	77	0.79	6.56
	Black/African American	4,933	0.77	6.48
	American Indian	43	0.85	6.56
	White	32,927	0.81	6.41
	Two or More Races	2,684	0.80	6.45
Migrant	Non-Migrant	46,148	0.81	6.55
	Migrant	251	0.78	6.54
LEP	Non-LEP	42,227	0.81	6.52
	LEP	4,172	0.72	6.55
Economic Disadvantage	Economically Disadvantaged	29,011	0.80	6.46
	Not Economically Disadvantaged	17,388	0.80	6.56
IEP	Non-IEP	38,095	0.80	6.55
	IEP	8,304	0.82	6.65

Grade 7 Science

Category	Group	N	Reliability	SEM
All	Students Tested	43,613	0.83	6.12
Gender	Female	21,043	0.81	6.16
	Male	22,570	0.84	6.19
Ethnicity	Hispanic	4,327	0.79	6.26
	Asian	1,031	0.86	6.23
	Native Hawaiian/Pacific Islander	86	0.83	6.13
	Black/African American	4,439	0.73	6.29
	American Indian	50	0.81	6.50
	White	31,337	0.83	6.09
	Two or More Races	2,343	0.81	6.19
Migrant	Non-Migrant	43,379	0.83	6.12
	Migrant	234	0.75	6.35
LEP	Non-LEP	40,983	0.83	6.08
	LEP	2,630	0.57	6.48
Economic Disadvantage	Economically Disadvantaged	26,014	0.79	6.24
	Not Economically Disadvantaged	17,599	0.84	6.04
IEP	Non-IEP	37,921	0.82	6.23
	IEP	5,692	0.74	6.34

Grade 11 Science

Category	Group	N	Reliability	SEM
All	Students Tested	46,314	0.83	6.33
Gender	Female	22,951	0.82	6.20
	Male	23,358	0.84	6.41
Ethnicity	Hispanic	4,566	0.81	6.39
	Asian	917	0.87	6.26
	Native Hawaiian/Pacific Islander	84	0.80	6.35
	Black/African American	4,999	0.75	6.53
	American Indian	57	0.83	6.40
	White	33,607	0.83	6.26
	Two or More Races	2,078	0.82	6.43
Migrant	Non-Migrant	46,151	0.83	6.34
	Migrant	163	0.69	6.55
LEP	Non-LEP	44,150	0.83	6.27
	LEP	2,164	0.61	6.83
Economic Disadvantage	Economically Disadvantaged	25,061	0.80	6.39
	Not Economically Disadvantaged	21,253	0.84	6.22
IEP	Non-IEP	41,753	0.83	6.32
	IEP	4,561	0.69	6.61

Grade 5 Social Studies

Category	Group	N	Reliability	SEM
All	Students Tested	47,032	0.85	6.29
Gender	Female	22,883	0.84	6.32
	Male	24,149	0.86	6.23
Ethnicity	Hispanic	4,741	0.83	6.27
	Asian	1,046	0.86	6.79
	Native Hawaiian/Pacific Islander	97	0.84	6.18
	Black/African American	4,957	0.81	6.12
	American Indian	74	0.87	6.44
	White	33,466	0.85	6.23
	Two or More Races	2,651	0.84	6.23
Migrant	Non-Migrant	46,803	0.85	6.29
	Migrant	229	0.81	6.21
LEP	Non-LEP	43,744	0.85	6.24
	LEP	3,288	0.74	6.12
Economic Disadvantage	Economically Disadvantaged	29,187	0.84	6.12
	Not Economically Disadvantaged	17,845	0.84	6.48
IEP	Non-IEP	39,333	0.84	6.31
	IEP	7,699	0.86	6.21

Grade 8 Social Studies

Category	Group	N	Reliability	SEM
All	Students Tested	46,552	0.87	6.30
Gender	Female	22,575	0.87	6.21
	Male	23,976	0.87	6.38
Ethnicity	Hispanic	4,743	0.85	6.22
	Asian	986	0.87	6.79
	Native Hawaiian/Pacific Islander	99	0.86	6.32
	Black/African American	5,068	0.83	6.09
	American Indian	54	0.87	6.45
	White	33,224	0.87	6.31
	Two or More Races	2,376	0.86	6.25
Migrant	Non-Migrant	46,306	0.87	6.30
	Migrant	246	0.81	6.09
LEP	Non-LEP	43,711	0.87	6.29
	LEP	2,841	0.68	6.09
Economic Disadvantage	Economically Disadvantaged	27,584	0.85	6.23
	Not Economically Disadvantaged	18,968	0.87	6.42
IEP	Non-IEP	40,857	0.87	6.25
	IEP	5,695	0.80	6.21

Grade 11 Social Studies

Category	Group	N	Reliability	SEM
All	Students Tested	46,180	0.88	6.32
Gender	Female	22,875	0.86	6.47
	Male	23,300	0.88	6.61
Ethnicity	Hispanic	4,547	0.86	6.34
	Asian	913	0.88	6.97
	Native Hawaiian/Pacific Islander	83	0.88	6.54
	Black/African American	4,976	0.84	6.30
	American Indian	57	0.86	6.35
	White	33,520	0.87	6.56
	Two or More Races	2,078	0.87	6.37
Migrant	Non-Migrant	46,016	0.88	6.32
	Migrant	164	0.82	6.11
LEP	Non-LEP	44,031	0.87	6.54
	LEP	2,149	0.70	6.24
Economic Disadvantage	Economically Disadvantaged	24,978	0.86	6.22
	Not Economically Disadvantaged	21,202	0.87	6.76
IEP	Non-IEP	41,632	0.87	6.50
	IEP	4,548	0.80	6.22

Grade 5 Editing and Mechanics

Category	Group	N	Reliability	SEM
All	Students Tested	46,311	0.85	6.90
Gender	Female	22,548	0.84	7.06
	Male	23,763	0.85	6.89
Ethnicity	Hispanic	4,709	0.85	6.66
	Asian	1,035	0.83	7.29
	Native Hawaiian/Pacific Islander	97	0.84	6.89
	Black/African American	4,948	0.84	6.63
	American Indian	73	0.87	6.96
	White	32,812	0.84	6.94
	Two or More Races	2,637	0.84	6.97
Migrant	Non-Migrant	46,084	0.85	6.89
	Migrant	227	0.82	6.74
LEP	Non-LEP	43,040	0.84	7.00
	LEP	3,271	0.79	6.68
Economic Disadvantage	Economically Disadvantaged	28,758	0.84	6.89
	Not Economically Disadvantaged	17,553	0.82	7.23
IEP	Non-IEP	38,769	0.83	7.00
	IEP	7,542	0.85	6.87

Grade 8 Editing and Mechanics

Category	Group	N	Reliability	SEM
All	Students Tested	45,937	0.85	7.09
Gender	Female	22,274	0.84	7.11
	Male	23,662	0.85	7.08
Ethnicity	Hispanic	4,726	0.86	6.78
	Asian	974	0.84	7.31
	Native Hawaiian/Pacific Islander	97	0.83	6.81
	Black/African American	5,050	0.85	6.80
	American Indian	54	0.80	6.90
	White	32,665	0.84	7.14
	Two or More Races	2,369	0.84	6.99
Migrant	Non-Migrant	45,692	0.85	7.08
	Migrant	245	0.84	7.11
LEP	Non-LEP	43,107	0.84	7.14
	LEP	2,830	0.79	6.89
Economic Disadvantage	Economically Disadvantaged	27,180	0.85	6.91
	Not Economically Disadvantaged	18,757	0.83	7.20
IEP	Non-IEP	40,343	0.84	7.00
	IEP	5,594	0.83	6.86

Grade 11 Editing and Mechanics

Category	Group	N	Reliability	SEM
All	Students Tested	45,647	0.87	6.80
Gender	Female	22,634	0.86	6.93
	Male	23,008	0.87	6.79
Ethnicity	Hispanic	4,526	0.85	6.92
	Asian	911	0.87	7.38
	Native Hawaiian/Pacific Islander	79	0.87	6.89
	Black/African American	4,967	0.82	6.93
	American Indian	56	0.87	7.18
	White	33,032	0.86	6.98
	Two or More Races	2,070	0.85	6.85
Migrant	Non-Migrant	45,484	0.87	6.80
	Migrant	163	0.81	7.18
LEP	Non-LEP	43,502	0.86	6.94
	LEP	2,145	0.64	7.27
Economic Disadvantage	Economically Disadvantaged	24,670	0.85	6.82
	Not Economically Disadvantaged	20,977	0.86	7.07
IEP	Non-IEP	41,162	0.86	6.88
	IEP	4,485	0.78	7.14

Grade 5 On-Demand Writing

Category	Group	N	Reliability	SEM
All	Students Tested	44,564	0.95	5.01
Gender	Female	21,677	0.96	4.40
	Male	22,887	0.95	4.97
Ethnicity	Hispanic	4,470	0.95	5.00
	Asian	953	0.96	4.42
	Native Hawaiian/Pacific Islander	91	0.96	5.11
	Black/African American	4,728	0.94	5.43
	American Indian	70	0.95	5.12
	White	31,709	0.96	4.38
	Two or More Races	2,543	0.95	4.86
Migrant	Non-Migrant	44,356	0.95	5.00
	Migrant	208	0.94	5.35
LEP	Non-LEP	41,546	0.96	4.42
	LEP	3,018	0.92	5.90
Economic Disadvantage	Economically Disadvantaged	27,733	0.95	4.94
	Not Economically Disadvantaged	16,831	0.96	4.23
IEP	Non-IEP	37,446	0.96	4.17
	IEP	7,118	0.92	6.14

Grade 8 On-Demand Writing

Category	Group	N	Reliability	SEM
All	Students Tested	43,642	0.96	5.68
Gender	Female	21,336	0.97	4.82
	Male	22,305	0.96	5.59
Ethnicity	Hispanic	4,283	0.96	5.58
	Asian	914	0.97	4.82
	Native Hawaiian/Pacific Islander	91	0.96	5.02
	Black/African American	4,648	0.94	6.46
	American Indian	51	0.96	5.85
	White	31,388	0.97	4.81
	Two or More Races	2,265	0.96	5.56
Migrant	Non-Migrant	43,446	0.96	5.67
	Migrant	196	0.95	6.40
LEP	Non-LEP	41,364	0.96	5.62
	LEP	2,278	0.91	6.97
Economic Disadvantage	Economically Disadvantaged	25,595	0.96	5.57
	Not Economically Disadvantaged	18,047	0.97	4.68
IEP	Non-IEP	38,705	0.97	4.71
	IEP	4,937	0.90	7.47

Grade 11 On-Demand Writing

Category	Group	N	Reliability	SEM
All	Students Tested	42,499	0.96	5.38
Gender	Female	21,475	0.97	4.41
	Male	21,019	0.96	5.45
Ethnicity	Hispanic	4,095	0.96	5.49
	Asian	851	0.97	4.49
	Native Hawaiian/Pacific Islander	76	0.97	5.03
	Black/African American	4,546	0.95	5.89
	American Indian	55	0.96	5.47
	White	30,939	0.97	4.56
	Two or More Races	1,931	0.96	5.27
Migrant	Non-Migrant	42,360	0.96	5.37
	Migrant	139	0.95	6.36
LEP	Non-LEP	40,706	0.97	4.59
	LEP	1,793	0.91	6.88
Economic Disadvantage	Economically Disadvantaged	22,884	0.96	5.33
	Not Economically Disadvantaged	19,615	0.97	4.46
IEP	Non-IEP	38,551	0.97	4.42
	IEP	3,948	0.91	7.32

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 3 Reading

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
RE03921257081	Overall	23,481	4,718	80.8	19.2	0.0	90.7	23.1	44.1	31.3	-	-	0.4	0.1	0.0	0.5	0.4
RE03921257833	Overall	25,736	5,163	83.3	16.7	0.0	80.5	30.2	38.2	29.8	-	-	0.4	0.1	0.0	0.9	0.5
RE03923952762	Overall	23,393	4,718	87.7	11.4	0.9	90.4	57.7	17.5	22.2	-	-	0.8	0.1	0.0	0.9	0.8
RE03925251463	Overall	25,642	5,165	80.2	17.6	2.2	88.5	48.5	39.9	8.3	-	-	0.7	0.3	0.0	1.4	0.9
RE03007748358	Overall	2,502	900	81.7	18.3	0.0	-	34.9	46.5	17.9	-	-	0.7	0.0	0.0	0.0	0.0
RE03011555990	Overall	2,508	907	75.4	24.4	0.2	-	37.0	41.4	20.6	-	-	0.9	0.0	0.1	0.1	0.1
RE03011556178	Overall	2,507	887	78.7	21.0	0.3	-	45.4	39.5	14.1	-	-	0.9	0.0	0.0	0.0	0.0
RE03032400107	Overall	2,501	873	77.9	22.1	0.0	-	46.2	37.9	15.2	-	-	0.7	0.0	0.0	0.0	0.0
RE03032400112	Overall	2,508	905	80.1	19.8	0.1	-	45.5	37.4	15.6	-	-	1.5	0.0	0.0	0.1	0.1
RE03032400201	Overall	2,500	903	81.8	18.2	0.0	-	40.8	39.0	19.6	-	-	0.7	0.0	0.0	0.0	0.0
RE03032400211	Overall	2,500	904	77.3	22.7	0.0	-	44.3	39.2	15.5	-	-	1.0	0.0	0.0	0.0	0.0
RE03042400203a	Overall	2,500	878	79.5	20.5	0.0	-	27.0	50.8	21.7	-	-	0.5	0.0	0.0	0.0	0.0
RE03042400206a	Overall	2,500	881	83.5	16.5	0.0	-	24.7	51.3	23.4	-	-	0.6	0.0	0.0	0.0	0.0

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 4 Reading

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
RE04918441324	Overall	46,324	9,294	79.9	19.7	0.4	80.0	19.9	50.1	29.0	-	-	0.3	0.0	0.0	0.3	0.3
RE04920352801	Overall	24,592	4,941	65.6	32.2	2.2	66.2	28.1	26.9	20.5	12.5	10.1	0.5	0.1	0.0	0.6	0.6
RE04921053067	Overall	21,697	4,354	65.6	34.1	0.3	71.3	20.0	29.0	30.8	15.8	3.1	0.3	0.0	0.0	0.3	0.4
RE04032400305a	Overall	2,502	885	79.8	20.2	0.0	-	36.9	19.3	21.6	17.9	3.6	0.8	0.0	0.0	0.0	0.0
RE04032400312a	Overall	2,502	900	80.1	19.2	0.7	-	39.9	42.6	17.1	-	-	0.3	0.0	0.0	0.0	0.0
RE04042400102	Overall	2,500	892	66.8	33.2	0.0	-	31.5	31.0	25.6	9.7	1.8	0.3	0.0	0.1	0.0	0.1
RE04042400105	Overall	2,501	898	82.3	16.4	1.3	-	39.1	32.2	28.2	-	-	0.3	0.0	0.0	0.1	0.1
RE04042400311	Overall	2,500	873	82.9	17.0	0.1	-	47.3	43.3	9.0	-	-	0.3	0.0	0.0	0.1	0.0
RE04042400312	Overall	2,500	888	66.9	30.5	2.6	-	31.9	29.3	25.0	10.4	3.0	0.4	0.0	0.0	0.0	0.1
RE04042400411	Overall	2,500	884	78.3	21.7	0.0	-	22.7	59.2	17.7	-	-	0.3	0.0	0.0	0.0	0.1
RE04042400412	Overall	2,500	861	68.4	31.6	0.0	-	24.8	27.2	33.4	12.3	1.7	0.4	0.0	0.0	0.0	0.2
RE04042400506	Overall	2,500	875	71.0	28.8	0.2	-	42.2	40.4	17.1	-	-	0.2	0.0	0.0	0.0	0.0
RE04042400509	Overall	2,501	894	64.4	35.4	0.2	-	32.2	26.0	26.3	11.1	3.9	0.4	0.0	0.0	0.0	0.2

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Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 5 Reading

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
RE05009150554	Overall	21,690	4,344	79.8	20.2	0.0	80.8	44.5	33.7	21.1	-	-	0.2	0.0	0.0	0.2	0.2
RE05919245732	Overall	25,355	5,083	80.4	19.5	0.1	81.1	35.2	37.3	26.4	-	-	0.3	0.0	0.0	0.3	0.4
RE05919938465	Overall	46,972	9,430	65.2	30.8	4.0	75.7	24.6	19.2	19.4	22.7	12.7	0.4	0.0	0.0	0.4	0.6
RE05011334255	Overall	2,500	903	78.7	21.2	0.1	-	25.8	49.1	24.7	-	-	0.4	0.0	0.0	0.0	0.0
RE05011334460	Overall	2,500	879	69.1	30.8	0.1	-	11.1	17.3	27.1	33.9	10.4	0.2	0.0	0.0	0.0	0.0
RE05052400106	Overall	2,500	871	70.7	29.3	0.0	-	8.8	27.9	34.8	22.6	5.7	0.3	0.0	0.0	0.0	0.0
RE05052400110	Overall	2,500	866	79.0	21.0	0.0	-	27.4	50.0	22.4	-	-	0.2	0.0	0.0	0.0	0.0
RE05052400203	Overall	2,500	872	81.8	18.2	0.0	-	40.9	34.8	23.6	-	-	0.7	0.0	0.0	0.0	0.0
RE05052400208	Overall	2,500	895	65.9	33.4	0.7	-	11.4	24.5	33.7	19.5	10.5	0.3	0.0	0.0	0.0	0.0
RE05052400302	Overall	2,500	838	67.7	27.0	5.3	-	10.3	25.3	35.3	20.7	8.2	0.2	0.0	0.0	0.0	0.0
RE05052400306	Overall	2,500	870	78.3	21.4	0.3	-	15.4	62.9	21.5	-	-	0.3	0.0	0.0	0.0	0.0
RE05052400405	Overall	2,500	892	67.0	33.0	0.0	-	12.5	26.3	36.3	15.4	9.2	0.4	0.0	0.0	0.0	0.0
RE05052400408	Overall	2,500	869	75.0	25.0	0.0	-	18.9	61.7	19.1	-	-	0.3	0.0	0.0	0.0	0.0

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Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 6 Reading

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
RE06011268430	Overall	25,251	5,090	65.0	34.1	0.9	74.7	28.4	24.1	31.0	10.7	3.4	0.8	0.2	0.1	0.4	0.8
RE06922753172	Overall	47,049	9,435	80.0	20.0	0.0	82.2	14.3	50.3	34.4	-	-	0.3	0.0	0.1	0.3	0.3
RE06926140209	Overall	21,597	4,345	65.6	31.5	2.9	80.2	13.3	32.6	35.0	12.0	5.4	0.7	0.0	0.0	0.5	0.5
RE06062400102	Overall	2,517	891	84.5	15.4	0.1	-	25.0	37.2	36.9	-	-	0.5	0.1	0.0	0.1	0.3
RE06062400112	Overall	2,503	888	66.9	32.9	0.2	-	21.1	26.2	27.2	16.8	7.8	0.8	0.0	0.0	0.0	0.1
RE06062400202	Overall	2,500	868	81.9	17.6	0.5	-	41.4	31.0	26.9	-	-	0.6	0.0	0.0	0.0	0.1
RE06062400212	Overall	2,501	866	63.0	35.5	1.5	-	22.6	24.2	23.8	20.5	8.5	0.4	0.0	0.0	0.0	0.1
RE06062400302	Overall	2,500	869	81.4	16.8	1.8	-	28.1	25.2	46.0	-	-	0.6	0.0	0.0	0.0	0.0
RE06062400312	Overall	2,500	857	65.6	32.2	2.2	-	26.0	28.8	24.6	13.7	4.7	1.7	0.0	0.0	0.1	0.3
RE06062400402	Overall	2,500	893	73.6	24.8	1.6	-	45.1	34.7	19.4	-	-	0.4	0.0	0.0	0.0	0.4
RE06062400412	Overall	2,500	872	68.2	31.8	0.0	-	13.5	25.7	36.0	18.1	6.0	0.6	0.0	0.0	0.0	0.1
RE06925458652	Overall	2,500	897	91.6	8.3	0.1	-	24.6	25.4	49.5	-	-	0.5	0.0	0.0	0.0	0.1
RE06925458858	Overall	2,500	878	80.4	19.6	0.0	-	19.7	37.1	42.9	-	-	0.3	0.0	0.0	0.0	0.1

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 7 Reading

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
RE07008839279	Overall	43,333	8,755	66.2	32.6	1.2	67.6	40.6	27.9	17.5	8.2	2.1	1.2	0.0	0.2	0.9	1.4
RE07924159911	Overall	43,609	8,753	80.1	19.8	0.1	80.3	15.5	36.1	46.7	-	-	0.5	0.0	0.1	0.4	0.7
RE07072400102	Overall	2,503	898	78.2	21.7	0.1	-	36.6	39.2	23.1	-	-	0.9	0.0	0.0	0.0	0.2
RE07072400112	Overall	2,502	853	69.1	30.9	0.0	-	34.6	29.6	21.3	8.9	4.6	0.9	0.0	0.1	0.0	0.1
RE07072400302	Overall	2,500	889	83.8	16.2	0.0	-	39.7	40.4	19.2	-	-	0.5	0.0	0.0	0.0	0.2
RE07072400312	Overall	2,501	902	67.0	33.0	0.0	-	27.8	23.9	26.8	14.0	6.8	0.7	0.0	0.0	0.0	0.1
RE07072400402	Overall	2,502	853	80.2	19.7	0.1	-	28.4	49.7	19.6	-	-	1.8	0.0	0.0	0.0	0.5
RE07072400412	Overall	2,500	896	66.0	33.8	0.2	-	29.3	37.8	22.5	7.4	1.9	0.9	0.0	0.0	0.0	0.1
RE07072400502	Overall	2,501	913	75.6	23.7	0.7	-	42.5	38.4	18.1	-	-	0.9	0.0	0.0	0.0	0.1
RE07072400512	Overall	2,501	867	67.1	30.5	2.4	-	21.0	31.5	28.9	11.7	5.9	0.9	0.0	0.0	0.0	0.1
RE07921734653	Overall	2,500	873	80.1	19.6	0.3	-	39.6	44.4	15.3	-	-	0.5	0.0	0.0	0.0	0.2
RE07921735587	Overall	2,500	888	79.7	20.3	0.0	-	42.2	40.5	16.5	-	-	0.6	0.0	0.0	0.0	0.1

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 8 Reading

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
RE08012254883	Overall	46,307	9,352	65.8	33.8	0.4	69.9	35.3	25.1	26.8	8.4	1.2	1.1	0.3	0.1	0.5	1.1
RE08922538979	Overall	46,593	9,353	77.1	22.9	0.0	86.5	27.3	39.6	31.5	-	-	0.4	0.1	0.1	0.4	0.6
RE08012139971	Overall	2,500	870	76.8	23.2	0.0	-	24.5	49.6	24.7	-	-	1.1	0.0	0.0	0.0	0.0
RE08012144141	Overall	2,500	896	84.0	15.9	0.1	-	22.3	36.2	40.8	-	-	0.7	0.0	0.0	0.0	0.0
RE08082400102	Overall	2,500	887	86.7	12.6	0.7	-	34.9	20.8	43.1	-	-	1.1	0.0	0.0	0.0	0.1
RE08082400112	Overall	2,500	908	72.1	26.4	1.5	-	39.4	31.8	19.1	6.4	2.0	1.2	0.0	0.0	0.0	0.1
RE08082400202	Overall	2,519	892	76.5	23.3	0.2	-	31.2	42.2	24.5	-	-	1.8	0.0	0.0	0.0	0.3
RE08082400212	Overall	2,500	913	71.3	28.2	0.5	-	11.3	43.9	32.4	10.6	1.2	0.7	0.0	0.0	0.0	0.0
RE08082400302	Overall	2,501	881	83.4	16.5	0.1	-	33.5	42.7	22.9	-	-	0.8	0.0	0.0	0.0	0.1
RE08082400312	Overall	2,502	867	70.6	28.2	1.2	-	12.1	49.2	25.8	8.7	3.4	0.8	0.0	0.1	0.0	0.1
RE08082400402	Overall	2,500	915	84.8	15.2	0.0	-	23.7	57.8	17.4	-	-	0.9	0.0	0.0	0.0	0.2
RE08082400412	Overall	2,501	890	72.5	26.7	0.8	-	25.2	31.3	27.7	11.4	3.2	1.1	0.0	0.0	0.0	0.1

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 10 Reading

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
RE10009849952	Overall	22,265	4,555	80.1	19.9	0.0	95.1	32.1	36.4	26.4	-	-	2.1	0.0	0.0	1.3	1.7
RE10011329071	Overall	25,271	5,197	71.2	26.6	2.2	94.9	23.1	24.5	26.0	12.9	6.9	2.7	0.0	0.1	1.8	2.0
RE10924246807	Overall	21,849	4,555	68.2	29.5	2.3	89.9	31.5	21.6	18.6	11.4	8.7	3.8	0.0	0.0	2.1	2.4
RE10926039908	Overall	24,797	5,199	81.8	16.9	1.3	93.1	39.3	27.9	23.0	-	-	4.4	0.0	0.1	2.6	2.8
RE10102400102	Overall	2,501	912	86.6	13.4	0.0	-	24.0	43.0	28.9	-	-	3.8	0.0	0.0	0.0	0.3
RE10102400112	Overall	2,500	916	67.6	32.3	0.1	-	31.3	25.1	22.0	9.1	3.2	8.3	0.0	0.0	0.0	1.0
RE10102400202	Overall	2,501	908	75.2	24.8	0.0	-	34.5	36.8	24.9	-	-	3.6	0.0	0.0	0.0	0.2
RE10102400212	Overall	2,500	901	68.8	31.2	0.0	-	26.0	33.1	22.7	10.4	3.2	4.6	0.0	0.0	0.0	0.1
RE10102400302	Overall	2,500	909	75.2	24.8	0.0	-	28.7	46.6	20.9	-	-	3.1	0.0	0.0	0.0	0.6
RE10102400312	Overall	2,500	903	64.6	35.3	0.1	-	30.1	28.6	20.6	11.3	4.6	4.2	0.0	0.0	0.0	0.6
RE10102400402	Overall	2,500	912	81.3	18.7	0.0	-	36.1	46.5	13.8	-	-	3.2	0.0	0.0	0.0	0.3
RE10102400412	Overall	2,501	915	68.4	31.6	0.0	-	24.6	29.2	22.8	13.2	5.6	4.0	0.0	0.0	0.0	0.6
RE10926150101	Overall	2,501	884	81.8	18.0	0.2	-	34.2	32.8	27.5	-	-	4.3	0.0	0.0	0.0	1.3
RE10926150338	Overall	2,503	914	82.2	17.8	0.0	-	36.7	45.3	13.5	-	-	4.0	0.0	0.0	0.0	0.5

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 3 Mathematics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
MA0320093	Part B	23,539	4,743	94.3	5.7	0.0	99.0	37.9	59.4	-	-	-	1.6	0.0	0.0	0.5	0.6
MA0320173	Overall	25,807	5,229	93.7	6.3	0.0	97.8	30.6	45.9	21.6	-	-	1.0	0.0	0.0	0.4	0.4

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Grade 4 Mathematics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
MA0420062	Part B	10,835	2,182	79.7	18.9	1.4	91.8	35.0	28.2	28.0	6.9	-	1.2	0.0	0.0	0.2	0.6
MA0420066	Overall	13,738	2,781	78.9	17.3	3.8	77.6	56.7	17.4	11.9	6.1	6.3	0.9	0.0	0.0	0.1	0.5
MA0420C4_02	Overall	46,400	9,355	93.0	6.7	0.3	95.4	33.1	50.5	15.3	-	-	0.7	0.0	0.0	0.1	0.2
MA0421086	Overall	46,278	9,355	92.4	7.3	0.3	87.1	61.8	20.3	16.0	-	-	0.9	0.0	0.0	0.2	0.8
MA0421259	Overall	21,785	4,393	82.5	16.3	1.2	85.8	25.4	19.4	25.7	8.6	19.8	0.6	0.0	0.0	0.1	0.4

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Grade 5 Mathematics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
MA0521053	Overall	24,899	5,032	94.5	5.2	0.3	91.7	66.3	13.3	18.9	-	-	0.9	0.0	0.0	0.1	0.3
MA0521057	Overall	47,039	9,490	89.6	10.0	0.4	93.5	38.1	21.5	39.3	-	-	0.8	0.0	0.0	0.1	0.2
MA0521076	Overall	47,027	9,490	72.7	25.0	2.3	76.2	32.4	27.3	15.4	8.9	14.9	0.8	0.0	0.0	0.1	0.2
MA0521187	Overall	22,161	4,458	93.2	6.5	0.3	95.0	40.4	23.0	36.0	-	-	0.5	0.0	0.0	0.1	0.1

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 6 Mathematics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
MA0621005	Overall	25,522	5,166	90.6	9.1	0.3	96.7	48.8	21.8	26.7	-	-	1.3	0.0	0.1	0.3	0.9
MA0621011	Overall	25,506	5,166	96.8	2.9	0.3	95.4	72.2	3.8	21.3	-	-	1.2	0.0	0.1	0.5	1.0
MA0621042	Overall	47,054	9,481	68.9	25.9	5.2	80.2	34.5	20.8	19.3	11.4	12.3	0.7	0.0	0.1	0.3	0.6
MA0621060	Overall	21,438	4,315	86.0	13.5	0.5	90.5	23.5	24.2	51.0	-	-	0.6	0.0	0.0	0.2	0.5
MA0621103	Overall	21,472	4,315	89.3	10.4	0.3	94.5	57.0	20.0	22.0	-	-	0.4	0.0	0.0	0.2	0.4

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Grade 7 Mathematics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
MA0720018	Overall	9,936	2,015	77.9	20.4	1.7	86.4	53.1	21.2	14.6	4.5	3.6	1.8	0.0	0.0	0.2	1.0
MA0720109	Overall	13,726	2,771	96.3	3.7	0.0	94.1	83.5	6.4	7.6	-	-	1.3	0.0	0.1	0.1	1.0
MA0720C3_03	Overall	9,777	1,988	93.4	6.3	0.3	91.9	69.3	22.5	2.9	-	-	2.6	0.0	0.1	0.3	2.3
MA0721019	Overall	33,534	6,819	87.6	12.0	0.4	91.9	58.5	32.5	5.1	-	-	2.3	0.0	0.1	0.2	1.3
MA0721087	Overall	33,542	6,792	77.8	19.2	3.0	87.9	32.2	36.5	11.5	11.7	5.5	1.7	0.0	0.1	0.1	0.7

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 8 Mathematics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
MA0820007	Overall	10,684	2,157	87.9	11.6	0.5	93.2	63.9	29.2	4.3	-	-	1.0	0.0	0.1	0.1	1.3
MA0820161	Overall	14,133	2,901	95.3	4.5	0.2	92.7	75.8	6.4	12.5	-	-	2.6	0.0	0.0	0.3	2.3
MA0820162	Overall	10,833	2,187	89.6	9.7	0.7	91.1	52.	20.4	16.9	5.1	2.8	0.9	0.0	0.0	0.2	1.0
MA0820194	Overall	21,394	4,340	87.1	12.7	0.2	95.8	31.8	37.1	27.6	-	-	1.5	0.0	0.0	0.2	1.8
MA0820C09_01	Part B	32,253	6,497	96.2	3.7	0.1	99.2	69.4	27.2	-	-	-	1.8	0.0	0.0	0.2	1.3
MA0821002	Overall	14,176	2,901	91.0	8.7	0.3	93.5	65.8	27.3	2.1	-	-	2.3	0.0	0.0	0.6	2.0
MA0821153	Overall	21,121	4,310	87.5	12.0	0.5	89.0	52.2	20.1	11.6	7.0	4.9	1.9	0.0	0.0	0.2	1.9
MA0821168	Part B	14,394	2,901	87.1	11.1	1.8	89.0	69.9	14.4	7.1	3.5	-	2.7	0.0	0.1	0.4	1.8

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Grade 10 Mathematics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
MA1020024	Overall	14,107	2,946	94.2	5.6	0.2	95.3	74.2	7.9	6.1	-	-	3.7	0.0	0.1	2.2	5.9
MA1020153	Overall	34,668	7,508	96.3	3.6	0.1	97.9	64.4	16.4	2.9	-	-	6.6	0.0	0.0	2.5	7.1
MA1021019	Overall	46,765	9,786	79.4	18.1	2.5	87.2	40.2	26.0	9.1	12.0	2.8	3.8	0.0	0.1	2.0	3.8
MA1021149	Overall	10,686	2,278	93.8	5.7	0.5	95.7	69.2	6.9	9.9	-	-	5.6	0.0	0.0	2.2	6.1

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Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 4 Science

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
SC041601_08	Overall	14,417	2,907	75.6	23.4	1.0	88.3	37.3	36.7	16.8	5.9	1.1	0.7	0.4	0.1	0.4	0.5
SC041614_05	Overall	17,464	3,540	77.1	22.0	0.9	90.3	30.5	44.3	18.4	2.7	0.7	1.1	0.4	0.1	0.8	0.8
SC041623_07	Overall	14,396	2,900	79.0	19.2	1.8	92.5	45.2	35.1	12.6	4.5	0.4	0.8	0.3	0.0	0.4	0.7
SC0420200101_09	Overall	5,873	5,873	88.5	10.7	0.8	-	20.8	33.5	43.9	-	-	0.6	0.4	0.1	0.4	0.5
SC0420200402_02	Overall	5,761	5,761	80.2	16.2	3.6	-	72.6	14.8	10.0	-	-	0.7	0.8	0.0	0.3	0.7
SC042020160609	Overall	8,787	8,787	77.5	21.2	1.3	-	68.5	22.0	5.2	-	-	0.8	1.4	0.3	1.1	0.7
SC042020190710	Overall	5,737	5,737	78.1	19.4	2.5	-	39.2	27.2	30.6	-	-	0.8	0.4	0.0	0.4	1.3
SC042020220809	Overall	8,800	8,800	78.9	19.5	1.6	-	45.7	26.5	15.7	-	-	1.8	5.2	0.2	2.2	2.7
SC042020282809	Overall	5,638	5,638	74.6	23.7	1.7	-	58.1	33.3	6.7	-	-	0.7	0.3	0.0	0.3	0.5
SC042020311109	Overall	5,773	5,773	78.4	20.7	0.9	-	21.7	55.4	21.6	-	-	0.5	0.3	0.0	0.2	0.3
SC042020461610	Overall	5,848	5,848	85.4	14.2	0.4	-	64.9	24.3	8.9	-	-	0.8	0.2	0.1	0.4	0.5
SC042020702403	Overall	5,808	5,808	77.4	20.9	1.7	-	43.9	45.0	8.5	-	-	0.5	0.9	0.1	0.6	0.7
SC042400107	Overall	5,826	5,826	79.8	19.7	0.5	-	43.9	35.9	16.1	-	-	1.1	0.7	0.0	0.5	1.8
SC042400405	Overall	5,879	5,879	78.7	20.6	0.7	-	24.5	44.7	28.1	-	-	1.0	0.7	0.0	0.4	0.6
SC042400507	Overall	5,791	5,791	74.1	24.5	1.4	-	32.1	41.0	24.9	-	-	0.7	0.3	0.0	0.3	0.7
SC042400605	Overall	5,672	5,672	80.4	18.4	1.2	-	69.6	23.6	4.4	-	-	0.8	0.4	0.0	0.5	0.7
SC042400708	Overall	5,790	5,790	72.6	25.1	2.3	-	55.6	30.4	10.4	-	-	1.1	0.6	0.0	0.7	1.1
SC042401207	Overall	5,769	5,769	81.5	17.2	1.3	-	52.0	32.7	12.3	-	-	0.9	0.8	0.0	0.5	0.7

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Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 7 Science

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
SC071600_02	Overall	13,200	2,668	69.8	28.2	2.0	88.7	37.8	39.7	14.8	4.4	0.4	1.1	0.4	0.1	0.3	1.0
SC071603_06	Overall	16,768	3,420	72.6	24.9	2.5	91.1	35.6	39.2	12.3	5.5	1.9	1.8	1.3	0.4	0.7	1.3
SC071618_07	Overall	13,389	2,709	82.7	16.2	1.1	92.7	62.4	23.9	6.7	2.2	0.1	1.6	1.1	0.1	0.5	1.4
SC072020020109	Overall	5,405	5,405	72.9	25.7	1.4	-	37.0	45.8	13.5	-	-	1.2	0.7	0.2	0.4	1.2
SC072020291010	Overall	5,456	5,456	80.5	18.8	0.7	-	54.2	33.5	6.7	-	-	1.3	1.8	0.2	0.5	1.9
SC072020441510	Overall	5,340	5,340	77.8	20.7	1.5	-	43.5	36.3	17.1	-	-	1.0	0.7	0.1	0.3	1.0
SC072020471609	Overall	5,277	5,277	76.4	23.4	0.2	-	18.0	60.2	18.7	-	-	0.8	0.7	0.2	0.3	1.1
SC072020592003	Overall	5,353	5,353	78.3	20.9	0.8	-	52.2	33.4	8.8	-	-	1.4	2.2	0.1	0.4	1.5
SC072020682304	Overall	5,285	5,285	72.6	26.4	1.0	-	41.4	40.3	13.6	-	-	2.2	0.5	0.1	0.3	1.7
SC072400205	Overall	5,309	5,309	79.5	19.8	0.7	-	33.0	38.0	22.9	-	-	2.3	0.9	0.2	0.4	2.3
SC072400308	Overall	8,703	8,703	93.1	6.7	0.2	-	56.0	30.8	0.4	-	-	4.6	1.4	0.6	1.1	5.1
SC072400505	Overall	5,325	5,325	79.5	18.7	1.8	-	52.4	30.6	12.7	-	-	1.2	1.1	0.2	0.4	1.5
SC072400605	Overall	8,835	8,835	86.6	12.4	1.0	-	57.9	29.1	4.7	-	-	3.0	1.2	0.5	0.9	2.8
SC072400807	Overall	5,231	5,231	88.4	11.3	0.3	-	38.3	44.7	12.2	-	-	1.7	0.8	0.1	0.4	1.7
SC072401107	Overall	5,277	5,277	95.0	4.7	0.3	-	38.6	46.4	10.6	-	-	1.1	1.1	0.1	0.3	1.7
SC072401207	Overall	5,330	5,330	75.6	23.3	1.1	-	40.2	40.9	14.9	-	-	1.7	0.5	0.1	0.5	1.4
SC072401208	Overall	5,281	5,281	81.4	18.4	0.2	-	30.9	45.1	20.3	-	-	1.0	1.0	0.1	0.3	1.3
SC072401407	Overall	5,357	5,357	95.9	3.8	0.3	-	29.7	38.3	27.9	-	-	1.1	1.1	0.1	0.4	1.5
SC072401408	Overall	5,229	5,229	92.8	7.0	0.2	-	76.6	17.2	1.9	-	-	1.2	1.2	0.1	0.3	1.4
SC072401507	Overall	5,430	5,430	81.4	17.1	1.5	-	60.4	30.5	3.2	-	-	1.0	2.5	0.1	0.3	2.2
SC072401605	Overall	8,726	8,726	80.2	19.0	0.8	-	41.2	34.9	14.8	-	-	3.0	2.6	0.6	1.0	2.0
SC072401710	Overall	5,346	5,346	73.7	24.8	1.5	-	49.1	35.4	12.0	-	-	1.4	0.3	0.1	0.7	1.0
SC072401810	Overall	5,415	5,415	83.0	16.3	0.7	-	52.0	29.5	13.0	-	-	1.9	0.6	0.1	0.4	2.5
SC072401912	Overall	5,457	5,457	81.5	18.1	0.4	-	35.5	48.8	11.4	-	-	1.2	0.7	0.2	0.5	1.8
SC072402006	Overall	5,318	5,318	84.8	14.3	0.9	-	65.5	20.7	5.7	-	-	2.0	1.5	0.1	0.5	4.1
SC072402104	Overall	5,392	5,392	78.4	20.8	0.8	-	24.8	46.2	23.9	-	-	1.2	0.9	0.2	0.6	2.3
SC072402206	Overall	5,217	5,217	87.8	12.1	0.1	-	61.3	29.1	3.9	-	-	2.2	1.0	0.1	0.6	1.9

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 11 Science

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
SC111606_08	Overall	14,031	2,920	71.2	26.2	2.6	87.7	30.5	34.2	25.4	1.4	0.1	3.5	1.5	0.0	0.8	2.6
SC111620_08	Overall	16,579	3,454	74.1	24.1	1.8	88.0	25.8	33.0	26.9	4.6	0.3	3.3	1.8	0.1	1.1	3.0
SC111704_03	Overall	14,187	2,937	68.0	30.6	1.4	89.2	32.1	34.7	21.8	2.8	0.4	3.1	1.6	0.0	0.8	2.7
SC112020060201	Overall	8,163	8,163	90.9	8.6	0.5	-	62.8	15.1	6.6	-	-	5.3	1.7	0.1	2.6	5.8
SC112020180609	Overall	5,610	5,610	78.3	19.9	1.8	-	62.7	22.5	3.1	-	-	4.2	2.8	0.1	1.3	3.4
SC112020210704	Overall	13,851	13,851	86.8	13.0	0.2	-	53.5	29.7	4.6	-	-	4.6	2.1	0.1	1.2	4.1
SC112020240807	Overall	5,619	5,619	78.1	21.7	0.2	-	46.5	34.2	7.9	-	-	4.0	1.8	0.1	1.1	4.5
SC112020481609	Overall	5,729	5,729	83.0	16.9	0.1	-	27.3	51.4	14.0	-	-	2.9	1.2	0.0	0.9	2.2
SC112020481610	Overall	5,682	5,682	77.7	22.3	0.0	-	21.6	52.7	18.2	-	-	2.5	1.2	0.1	1.0	2.8
SC112020632002	Overall	11,359	11,359	85.8	13.8	0.4	-	69.8	20.0	2.7	-	-	2.8	1.3	0.0	1.0	2.4
SC112400107	Overall	5,557	5,557	77.2	22.7	0.1	-	29.7	42.8	15.5	-	-	4.5	1.8	0.0	1.2	4.3
SC112400108	Overall	8,227	8,227	84.5	15.4	0.1	-	61.6	18.6	8.5	-	-	4.1	2.3	0.1	1.3	3.6
SC112400205	Overall	8,251	8,251	83.1	16.0	0.9	-	31.1	35.3	23.6	-	-	3.7	2.0	0.1	1.1	3.2
SC112400505	Overall	5,737	5,737	90.4	9.0	0.6	-	77.3	9.6	3.5	-	-	4.0	1.5	0.0	1.1	3.0
SC112400604	Overall	11,025	11,025	79.6	20.1	0.3	-	35.4	40.6	8.9	-	-	6.0	2.5	0.0	1.4	5.1
SC112400607	Overall	5,573	5,573	83.9	14.4	1.7	-	67.8	11.8	2.8	-	-	6.1	3.4	0.1	1.3	6.6
SC112400707	Overall	5,584	5,584	92.8	6.9	0.3	-	67.0	19.9	2.6	-	-	4.1	1.5	0.1	1.3	3.5
SC112400805	Overall	5,713	5,713	83.7	15.4	0.9	-	54.0	23.8	15.9	-	-	2.1	1.2	0.0	1.2	1.8
SC112400907	Overall	11,202	11,202	84.7	14.7	0.6	-	54.3	25.9	6.7	-	-	4.8	2.0	0.1	1.0	5.2
SC112401007	Overall	5,553	5,553	77.1	22.6	0.3	-	43.3	33.5	12.7	-	-	4.2	1.9	0.1	1.1	3.2
SC112401008	Overall	5,706	5,706	79.2	20.6	0.2	-	42.9	35.5	12.0	-	-	3.5	2.0	0.0	0.9	3.3
SC112401108	Overall	5,615	5,615	85.6	13.7	0.7	-	30.9	36.0	24.7	-	-	3.5	1.4	0.0	0.9	2.6
SC112401203	Overall	5,544	5,544	81.2	18.6	0.2	-	43.9	39.7	4.2	-	-	4.9	1.9	0.0	1.1	4.3
SC112401206	Overall	5,516	5,516	86.3	13.7	0.0	-	69.4	15.8	2.9	-	-	4.9	2.1	0.0	1.1	3.7
SC112401508	Overall	5,714	5,714	82.2	17.5	0.3	-	42.4	40.4	6.3	-	-	4.4	1.6	0.0	1.1	3.7
SC112401705	Overall	5,660	5,660	78.8	21.2	0.0	-	31.2	50.4	10.0	-	-	3.0	1.3	0.0	1.2	2.9
SC112402107	Overall	5,657	5,657	78.4	20.5	1.1	-	44.9	37.7	4.3	-	-	3.2	4.4	0.0	1.2	4.3
SC112402207	Overall	5,720	5,720	78.4	21.3	0.3	-	39.5	38.9	12.8	-	-	3.1	1.4	0.0	1.3	3.1
SC112402208	Overall	5,593	5,593	76.4	23.1	0.5	-	27.0	44.1	18.4	-	-	3.9	2.3	0.1	1.1	3.1

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 5 Social Studies

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
SS0521091_08	Overall	46,944	9,423	80.1	19.5	0.4	96.1	18.6	42.3	35.0	-	-	0.5	2.5	0.0	0.3	0.8
SS0522179_09	Overall	25,067	5,046	75.5	23.2	1.3	80.3	36.1	32.3	21.0	3.8	0.3	0.9	3.6	0.0	0.7	1.2
SS0522180_09	Overall	21,764	4,377	69.5	28.1	2.4	91.6	28.9	33.7	25.3	6.7	0.8	0.8	2.4	0.0	0.4	1.0

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Grade 8 Social Studies

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
SS0820043_09	Overall	21,280	4,327	69.1	28.5	2.4	86.0	12.3	21.3	28.2	24.6	5.8	2.0	2.8	0.0	0.9	2.1
SS0820048_09	Overall	24,638	5,008	70.0	29.1	0.9	75.0	24.2	23.7	24.8	13.3	4.4	1.9	3.6	0.1	0.9	3.1
SS0821086_08	Overall	24,797	5,007	81.9	17.3	0.8	97.0	22.6	47.8	22.5	-	-	1.1	3.5	0.1	0.7	1.7
SS0821088_08	Overall	21,401	4,326	81.5	18.2	0.3	95.5	29.4	38.0	26.3	-	-	1.3	2.7	0.0	0.6	1.6

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Grade 11 Social Studies

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
SS1120044_09	Overall	44,068	9,267	67.6	30.1	2.3	83.7	15.1	16.0	32.1	15.5	6.7	4.6	3.8	0.0	2.0	4.2
SS1120081_08	Overall	23,339	4,863	80.8	17.9	1.3	90.1	38.6	33.7	13.7	-	-	3.8	4.0	0.0	1.9	4.3
SS1122172_08	Overall	21,279	4,406	79.9	19.7	0.4	95.2	19.4	34.9	34.7	-	-	3.2	2.7	0.0	1.7	3.5

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic. Operational items have validity statistics.

Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 5 Editing and Mechanics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
EM05004935664	Overall	46,381	9,297	90.0	7.4	2.6	94.6	65.0	14.6	17.9	-	-	0.5	0.8	0.0	0.3	0.9
EM05004938419	Overall	46,392	9,297	90.2	7.1	2.7	96.1	60.9	10.8	26.6	-	-	0.4	0.4	0.0	0.2	0.6
EM05924037919	Overall	21,602	4,324	84.8	12.8	2.4	96.3	35.3	30.2	33.7	-	-	0.2	0.3	0.0	0.1	0.3
EM05924038025	Overall	21,599	4,324	80.6	17.8	1.6	97.0	12.8	33.2	53.5	-	-	0.1	0.1	0.0	0.1	0.2
EM05924649645	Overall	24,824	4,973	81.1	16.6	2.3	85.7	62.0	23.3	12.8	-	-	0.2	0.4	0.1	0.2	1.0
EM05924651459	Overall	24,821	4,973	87.2	9.6	3.2	98.8	52.1	22.4	23.7	-	-	0.4	0.5	0.1	0.2	0.7
EM052400106	Overall	2,516	863	83.2	15.3	1.5	-	21.9	40.7	36.5	-	-	0.3	0.0	0.0	0.1	0.5
EM052400108	Overall	2,542	865	80.9	17.3	1.8	-	33.1	32.4	33.1	-	-	0.2	0.5	0.0	0.2	0.6
EM052400118	Overall	2,500	855	91.0	8.5	0.5	-	43.8	31.1	24.5	-	-	0.2	0.0	0.0	0.0	0.3
EM052400205	Overall	2,523	856	82.2	17.0	0.8	-	43.7	27.4	28.2	-	-	0.3	0.0	0.0	0.0	0.3
EM052400208	Overall	2,504	867	94.1	3.7	2.2	-	78.5	3.7	16.8	-	-	0.3	0.0	0.0	0.0	0.7
EM052400215	Overall	2,500	884	91.2	7.1	1.7	-	21.3	7.2	70.9	-	-	0.4	0.0	0.0	0.0	0.3
EM052400304	Overall	2,500	856	83.5	14.3	2.2	-	55.6	13.6	30.3	-	-	0.3	0.0	0.0	0.0	0.2
EM052400305	Overall	2,501	885	86.1	13.1	0.8	-	34.5	23.1	42.0	-	-	0.2	0.1	0.0	0.0	0.1
EM052400312	Overall	2,502	851	86.3	12.9	0.8	-	58.2	22.1	19.3	-	-	0.3	0.1	0.0	0.0	0.1
EM052400403	Overall	2,504	903	88.4	10.7	0.9	-	62.9	18.7	17.2	-	-	0.7	0.4	0.0	0.0	0.1
EM052400414	Overall	2,509	880	85.8	12.3	1.9	-	45.8	10.4	43.4	-	-	0.1	0.1	0.0	0.0	0.1
EM052400417	Overall	2,504	872	89.2	10.6	0.2	-	65.7	16.3	17.6	-	-	0.3	0.0	0.0	0.0	0.1

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Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 8 Editing and Mechanics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
EM08003551618	Overall	21,007	4,225	87.1	11.0	1.9	89.1	52.0	11.5	33.4	-	-	0.8	0.6	0.0	0.2	1.4
EM08003553199	Overall	21,020	4,225	76.0	23.9	0.1	78.9	32.8	46.4	18.5	-	-	0.7	0.5	0.1	0.3	0.8
EM08005235556	Overall	45,880	9,218	95.6	3.6	0.8	97.4	55.6	3.8	37.7	-	-	0.8	0.6	0.1	0.4	1.0
EM08005235664	Overall	45,871	9,218	75.4	24.5	0.1	87.0	26.8	48.2	22.1	-	-	0.7	0.6	0.1	0.4	1.1
EM08925454757	Overall	24,826	4,993	86.3	12.6	1.1	88.4	34.3	13.3	48.5	-	-	0.8	1.1	0.1	0.6	1.4
EM08925454946	Overall	24,786	4,993	85.6	10.8	3.6	89.2	45.2	12.6	36.5	-	-	1.0	1.3	0.2	1.0	2.2
EM082400107	Overall	2,501	855	80.2	16.6	3.2	-	59.7	10.3	29.2	-	-	0.6	0.0	0.0	0.0	0.2
EM082400111	Overall	2,501	871	84.7	11.2	4.1	-	48.5	8.7	42.1	-	-	0.7	0.0	0.0	0.0	0.2
EM082400112	Overall	2,500	883	88.4	10.0	1.6	-	41.4	17.1	40.2	-	-	1.0	0.0	0.0	0.0	0.4
EM082400211	Overall	2,500	880	91.5	5.4	3.1	-	22.0	4.5	72.5	-	-	0.7	0.0	0.0	0.0	0.3
EM082400216	Overall	2,500	887	88.3	8.1	3.6	-	12.3	7.1	79.8	-	-	0.7	0.0	0.0	0.0	0.1
EM082400306	Overall	2,500	912	88.3	4.6	7.1	-	68.5	3.8	27.1	-	-	0.5	0.0	0.0	0.0	0.2
EM082400310	Overall	2,500	867	92.2	7.0	0.8	-	38.5	40.3	20.3	-	-	0.7	0.0	0.0	0.0	0.1
EM082400410	Overall	2,500	880	88.1	7.8	4.1	-	64.5	5.8	29.1	-	-	0.5	0.0	0.0	0.0	0.1
EM082400413	Overall	2,500	888	89.4	6.2	4.4	-	32.3	4.5	62.3	-	-	0.7	0.0	0.0	0.0	0.1
EM082400416	Overall	2,500	885	89.8	8.8	1.4	-	28.0	19.4	51.8	-	-	0.6	0.0	0.0	0.0	0.2
EM082400509	Overall	2,500	904	91.3	6.4	2.3	-	69.8	3.8	24.0	-	-	1.7	0.0	0.0	0.1	0.7
EM082400514	Overall	2,500	898	91.8	5.0	3.2	-	71.0	3.2	24.1	-	-	1.6	0.0	0.0	0.1	0.1
EM082400516	Overall	2,500	875	88.8	7.2	4.0	-	46.5	4.5	48.5	-	-	0.5	0.0	0.0	0.0	0.1

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Appendix L. Scoring Metrics for KSA Constructed-Response Items

Grade 11 Editing and Mechanics

Item	Trait	Inter-Rater Reliability						Frequency Distribution of Total Read %									
		Total # 1st Scored	Total # 2nd Scored	%Perfect Agreement	%Adjacent	%Non- Adjacent	Validity %Perfect Agreement	0	1	2	3	4	B	A	F	I	O
EM11003034244	Overall	44,582	9,158	77.0	23.0	0.0	81.2	49.4	27.1	13.9	-	-	2.8	2.2	0.0	1.2	3.5
EM11003041982	Overall	44,273	9,158	80.2	19.8	0.0	85.5	52.4	21.4	14.9	-	-	3.4	2.8	0.0	1.5	3.7
EM11003043177	Overall	44,462	9,158	80.1	19.9	0.0	89.4	47.2	22.1	20.4	-	-	2.9	2.2	0.0	1.7	3.5
EM11923454659	Overall	21,276	4,329	80.4	19.5	0.1	87.6	29.0	36.2	28.0	-	-	1.7	1.7	0.0	1.0	2.4
EM11924574349	Overall	23,809	4,829	87.5	12.5	0.0	96.5	14.3	51.7	28.2	-	-	1.6	1.2	0.0	1.1	1.9
EM11924576402	Overall	23,666	4,829	81.4	18.5	0.1	90.4	38.5	43.1	10.8	-	-	1.9	1.9	0.0	1.2	2.6
EM11923455151	Overall	21,147	7,497	80.2	19.8	0.0	78.1	53.3	28.6	9.8	-	-	2.5	2.2	0.0	1.1	2.4
EM112400105	Overall	2,502	935	79.9	18.7	1.4	-	49.5	24.1	20.6	-	-	5.0	0.1	0.0	0.1	0.7
EM112400114	Overall	2,500	873	86.3	12.2	1.5	-	26.6	35.4	34.1	-	-	3.4	0.3	0.0	0.0	0.2
EM112400201	Overall	2,503	912	90.6	9.4	0.0	-	46.0	37.2	13.4	-	-	2.7	0.2	0.0	0.1	0.5
EM112400207	Overall	2,503	902	79.5	18.5	2.0	-	27.2	32.7	36.1	-	-	3.3	0.1	0.0	0.1	0.5
EM112400211	Overall	2,501	914	80.6	19.4	0.0	-	62.1	23.9	9.1	-	-	3.6	0.6	0.0	0.0	0.7
EM112400301	Overall	2,501	887	91.1	8.2	0.7	-	29.3	23.4	43.7	-	-	2.6	0.3	0.0	0.0	0.6
EM112400302	Overall	2,501	913	73.7	23.8	2.5	-	60.0	20.8	14.4	-	-	3.3	0.5	0.0	0.1	0.9
EM112400308	Overall	2,502	909	80.2	18.7	1.1	-	75.9	14.3	4.7	-	-	3.9	0.4	0.0	0.0	0.9
EM112400401	Overall	2,502	929	92.7	6.2	1.1	-	46.8	35.6	14.4	-	-	2.6	0.3	0.0	0.0	0.3
EM112400403	Overall	2,503	891	93.4	5.8	0.8	-	12.5	7.1	77.1	-	-	3.0	0.1	0.0	0.0	0.3
EM112400410	Overall	2,502	914	73.1	24.4	2.5	-	40.3	30.4	25.9	-	-	3.0	0.1	0.0	0.0	0.3

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Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Grade 5 On-Demand Writing

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement	
WR05914242321	Clarity/Coherence	3.3	0.0	18.1	9.3	22.2	14.2	15.5	10.6	6.6	0.1	2.7	0.2	0.2	0.3	62.7	34.1	3.2	80.4	
WR05914242321	Language/Conventions	3.3	0.0	14.0	10.8	25.3	14.7	17.2	8.9	5.7	0.1	2.7	0.2	0.2	0.3	62.9	34.3	2.8	83.3	
WR05914242321	Organization	3.3	0.0	21.6	9.8	20.2	13.8	17.5	8.4	5.4	0.1	2.7	0.2	0.2	0.3	65.3	32.0	2.7	84.3	
WR05914242321	Sourcing	3.3	0.0	40.8	12.5	13.1	9.2	11.3	6.5	3.3	0.1	2.7	0.2	0.2	0.3	66.4	28.2	5.4	82.6	
WR05914242321	Support	3.3	0.0	22.3	10.0	21.0	14.1	15.7	8.3	5.2	0.1	2.7	0.2	0.2	0.3	64.7	32.4	2.9	83.8	
WR05914242464	Clarity/Coherence	1.4	0.0	9.5	8.0	24.7	20.1	23.2	8.9	4.2	0.0	1.3	0.0	0.1	0.1	60.2	37.0	2.8	85.8	
WR05914242464	Language/Conventions	1.4	0.0	10.2	8.5	25.1	19.6	23.9	7.9	3.5	0.0	1.3	0.0	0.1	0.1	61.7	36.0	2.3	88.7	
WR05914242464	Organization	1.4	0.0	12.5	8.6	22.2	19.3	24.1	8.5	3.4	0.0	1.3	0.0	0.1	0.1	61.5	36.3	2.2	89.5	
WR05914242464	Sourcing	1.4	0.0	27.7	15.7	22.6	13.8	10.6	5.6	2.6	0.0	1.3	0.0	0.1	0.1	60.5	35.0	4.5	88.5	
WR05914242464	Support	1.4	0.0	12.9	8.3	27.4	20.5	18.8	7.3	3.4	0.0	1.3	0.0	0.1	0.1	61.7	36.1	2.2	88.9	
WR05914942744	Clarity/Coherence	1.1	0.0	8.7	8.5	22.3	15.6	27.8	10.1	5.9	0.1	1.0	0.0	0.1	0.1	64.6	34.2	1.2	83.9	
WR0591942744	Language/Conventions	1.1	0.0	5.2	6.5	24.0	15.6	30.6	10.2	6.8	0.1	1.0	0.0	0.1	0.1	66.6	32.3	1.1	88.8	
WR05914942744	Organization	1.1	0.0	8.9	6.9	22.7	14.9	29.2	10.2	6.1	0.1	1.0	0.0	0.1	0.1	66.8	32.0	1.2	88.1	
WR05914942744	Sourcing	1.1	0.0	20.6	15.4	22.5	14.7	15.3	7.0	3.4	0.1	1.0	0.0	0.1	0.1	60.4	37.1	2.5	81.8	
WR05914942744	Support	1.1	0.0	9.0	9.5	25.4	15.1	25.0	9.0	5.9	0.1	1.0	0.0	0.1	0.1	65.4	33.5	1.1	84.2	
WR05914943893	Clarity/Coherence	1.1	0.0	8.1	2.2	21.9	15.5	22.4	17.9	11.0	0.0	0.9	0.0	0.0	0.2	62.2	35.4	2.4	78.2	
WR05914943893	Language/Conventions	1.1	0.0	6.9	1.3	20.8	17.4	20.7	20.8	11.0	0.0	0.9	0.0	0.0	0.2	58.8	39.4	1.8	75.8	
WR05914943893	Organization	1.1	0.0	9.3	3.6	18.8	15.7	24.5	17.4	9.6	0.0	0.9	0.0	0.0	0.2	61.3	36.7	2.0	82.3	
WR05914943893	Sourcing	1.1	0.0	19.2	15.6	19.2	15.8	18.0	7.8	3.3	0.0	0.9	0.0	0.0	0.2	57.4	39.1	3.5	75.2	
WR05914943893	Support	1.1	0.0	8.1	2.7	22.1	17.4	28.6	13.5	6.5	0.0	0.9	0.0	0.0	0.2	65.1	33.5	1.4	82.3	
OD052400101	Clarity/Coherence	6.0	0.0	15.6	14.9	23.4	14.9	13.3	7.2	4.8	0.1	1.1	0.0	0.0	0.1	56.1	39.9	4.0	-	
OD052400101	Language/Conventions	6.0	0.0	16.5	14.6	20.7	15.9	13.6	7.6	5.2	0.1	1.1	0.0	0.0	0.1	56.7	40.1	3.2	-	
OD052400101	Organization	6.0	0.0	24.5	11.5	17.7	15.0	13.1	6.9	5.3	0.1	1.1	0.0	0.0	0.1	58.1	38.5	3.4	-	
OD052400101	Sourcing	6.0	0.0	30.0	13.1	18.7	11.9	10.4	6.0	3.9	0.1	1.1	0.0	0.0	0.1	57.0	37.6	5.4	-	
OD052400101	Support	6.0	0.0	23.6	14.9	21.8	13.2	10.7	5.9	4.0	0.1	1.1	0.0	0.0	0.1	56.8	38.8	4.4	-	

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Prompt	Trait	Frequency Distribution of Final Trait Score %									Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement
OD052400102	Clarity/Coherence	1.2	0.0	9.6	12.3	25.0	18.3	19.0	9.4	5.3	0.2	5.0	0.0	0.0	0.4	59.9	36.8	3.3	-
OD052400102	Language/Conventions	1.2	0.0	10.7	12.2	22.4	18.4	19.9	9.5	5.6	0.2	5.0	0.0	0.0	0.4	58.2	38.1	3.7	-
OD052400102	Organization	1.2	0.0	15.2	11.6	19.5	17.6	19.9	9.4	5.7	0.2	5.0	0.0	0.0	0.4	64.0	33.3	2.7	-
OD052400102	Sourcing	1.2	0.0	18.9	12.8	22.3	16.6	16.0	8.2	3.9	0.2	5.0	0.0	0.0	0.4	64.7	31.0	4.3	-
OD052400102	Support	1.2	0.0	14.7	15.0	25.3	16.3	15.7	7.6	4.2	0.2	5.0	0.0	0.0	0.4	62.1	34.0	3.9	-
OD052400201	Clarity/Coherence	5.6	0.0	11.4	14.8	25.7	17.1	15.4	6.1	4.0	0.0	3.2	0.0	0.0	0.4	58.6	37.5	3.9	-
OD052400201	Language/Conventions	5.6	0.0	10.6	11.6	24.2	16.2	19.5	8.2	4.1	0.0	3.2	0.0	0.0	0.4	57.9	38.8	3.3	-
OD052400201	Organization	5.6	0.0	16.6	11.4	21.2	15.5	18.6	7.0	4.1	0.0	3.2	0.0	0.0	0.4	60.4	36.6	3.0	-
OD052400201	Sourcing	5.6	0.0	28.0	10.6	20.6	13.8	12.0	5.9	3.4	0.0	3.2	0.0	0.0	0.4	62.5	32.7	4.8	-
OD052400201	Support	5.6	0.0	19.9	16.2	21.3	16.2	12.3	5.6	3.0	0.0	3.2	0.0	0.0	0.4	58.4	37.6	4.0	-
OD052400202	Clarity/Coherence	3.8	0.0	9.2	12.7	29.8	17.9	15.5	6.9	4.2	0.0	4.1	0.0	0.2	0.9	58.4	38.0	3.6	-
OD052400202	Language/Conventions	3.8	0.0	10.4	12.8	27.4	18.2	15.5	7.8	4.2	0.0	4.1	0.0	0.2	0.9	61.8	36.0	2.2	-
OD052400202	Organization	3.8	0.0	16.6	12.5	23.8	16.8	15.6	7.3	3.8	0.0	4.1	0.0	0.2	0.9	63.7	33.9	2.4	-
OD052400202	Sourcing	3.8	0.0	25.4	12.2	22.8	13.8	12.2	6.7	3.1	0.0	4.1	0.0	0.2	0.9	65.9	30.3	3.8	-
OD052400202	Support	3.8	0.0	17.0	16.1	25.7	15.2	12.7	6.4	3.1	0.0	4.1	0.0	0.2	0.9	58.1	38.0	3.9	-
OD052400301	Clarity/Coherence	1.4	0.0	5.8	9.3	32.7	22.1	20.5	6.5	1.8	0.2	2.4	0.0	0.1	0.7	57.7	39.4	2.9	-
OD052400301	Language/Conventions	1.4	0.0	8.5	11.1	28.6	22.1	19.9	6.5	2.0	0.2	2.4	0.0	0.1	0.7	59.2	38.5	2.3	-
OD052400301	Organization	1.4	0.0	15.2	10.2	26.3	19.9	18.9	6.4	1.8	0.2	2.4	0.0	0.1	0.7	61.7	36.3	2.0	-
OD052400301	Sourcing	1.4	0.0	32.9	15.3	18.8	13.3	11.6	5.3	1.4	0.2	2.4	0.0	0.1	0.7	63.3	32.9	3.8	-
OD052400301	Support	1.4	0.0	12.4	13.8	29.1	18.8	16.5	6.3	1.6	0.2	2.4	0.0	0.1	0.7	59.3	38.0	2.7	-
OD052400302	Clarity/Coherence	2.2	0.0	6.7	11.5	28.0	21.4	19.9	7.2	3.0	0.0	1.8	0.0	0.1	0.9	57.7	39.7	2.6	-
OD052400302	Language/Conventions	2.2	0.0	8.4	10.9	26.4	19.9	20.7	8.2	3.2	0.0	1.8	0.0	0.1	0.9	60.3	37.7	2.0	-
OD052400302	Organization	2.2	0.0	14.7	10.0	24.1	18.8	20.1	6.8	3.4	0.0	1.8	0.0	0.1	0.9	63.0	35.2	1.8	-
OD052400302	Sourcing	2.2	0.0	37.6	15.1	15.9	12.5	9.9	4.8	2.0	0.0	1.8	0.0	0.1	0.9	66.7	30.4	2.9	-
OD052400302	Support	2.2	0.0	12.8	14.2	25.7	20.2	14.8	7.2	2.8	0.0	1.8	0.0	0.1	0.9	59.1	38.4	2.5	-
OD052400401	Clarity/Coherence	3.0	0.0	9.8	14.1	25.9	19.7	18.6	5.9	3.0	0.0	5.4	0.0	0.0	0.0	59.2	36.6	4.2	-
OD052400401	Language/Conventions	3.0	0.0	9.6	12.6	25.7	18.4	21.2	6.9	2.8	0.0	5.4	0.0	0.0	0.0	58.3	38.1	3.6	-
OD052400401	Organization	3.0	0.0	15.9	11.1	23.7	17.4	19.4	6.8	2.7	0.0	5.4	0.0	0.0	0.0	61.2	35.1	3.7	-
OD052400401	Sourcing	3.0	0.0	29.5	12.2	22.3	13.8	12.3	4.5	2.5	0.0	5.4	0.0	0.0	0.0	59.5	34.5	6.0	-
OD052400401	Support	3.0	0.0	15.3	16.7	25.9	17.1	14.8	4.7	2.6	0.0	5.4	0.0	0.0	0.0	57.5	37.1	5.4	-

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement	
OD052400402	Clarity/Coherence	3.5	0.0	9.7	11.9	28.0	20.8	15.6	6.8	3.6	0.1	4.7	0.0	0.0	0.1	59.5	35.7	4.8	-	
OD052400402	Language/Conventions	3.5	0.0	9.4	10.9	25.4	20.3	19.5	7.3	3.6	0.1	4.7	0.0	0.0	0.1	59.6	36.2	4.2	-	
OD052400402	Organization	3.5	0.0	16.5	10.8	21.2	18.1	19.1	7.4	3.3	0.1	4.7	0.0	0.0	0.1	63.8	33.1	3.1	-	
OD052400402	Sourcing	3.5	0.0	28.6	12.1	21.1	15.3	11.4	5.6	2.4	0.1	4.7	0.0	0.0	0.1	60.6	33.7	5.7	-	
OD052400402	Support	3.5	0.0	15.4	14.6	28.3	17.8	12.1	5.6	2.7	0.1	4.7	0.0	0.0	0.1	57.3	38.1	4.6	-	
OD052400501	Clarity/Coherence	1.7	0.0	7.6	11.5	30.4	19.9	18.5	7.3	3.1	0.1	1.0	0.0	0.0	0.0	60.3	37.7	2.0	-	
OD052400501	Language/Conventions	1.7	0.0	9.7	11.4	28.2	20.3	18.5	7.2	3.0	0.1	1.0	0.0	0.0	0.0	58.6	39.6	1.8	-	
OD052400501	Organization	1.7	0.0	14.5	11.1	23.5	18.9	19.9	7.5	2.9	0.1	1.0	0.0	0.0	0.0	62.8	35.3	1.9	-	
OD052400501	Sourcing	1.7	0.0	31.3	14.9	17.9	13.6	12.3	5.8	2.6	0.1	1.0	0.0	0.0	0.0	62.0	31.5	6.5	-	
OD052400501	Support	1.7	0.0	14.5	15.5	25.3	19.0	14.7	6.5	2.9	0.1	1.0	0.0	0.0	0.0	57.6	39.6	2.8	-	
OD052400502	Clarity/Coherence	1.0	0.0	7.0	9.9	31.0	21.0	19.4	6.8	3.7	0.2	1.5	0.0	0.0	0.0	58.2	38.7	3.1	-	
OD052400502	Language/Conventions	1.0	0.0	8.0	11.6	29.7	20.4	18.3	7.6	3.3	0.2	1.5	0.0	0.0	0.0	58.5	38.9	2.6	-	
OD052400502	Organization	1.0	0.0	15.3	10.1	26.2	18.2	18.9	7.0	3.2	0.2	1.5	0.0	0.0	0.0	60.4	37.5	2.1	-	
OD052400502	Sourcing	1.0	0.0	35.5	13.0	16.9	13.1	11.8	5.5	3.2	0.2	1.5	0.0	0.0	0.0	59.5	34.2	6.3	-	
OD052400502	Support	1.0	0.0	13.1	14.2	28.0	19.4	14.8	6.1	3.4	0.2	1.5	0.0	0.0	0.0	55.2	41.0	3.8	-	
OD052400601	Clarity/Coherence	5.4	0.0	6.6	10.4	28.8	19.5	19.7	6.6	2.9	0.0	1.3	0.0	0.0	0.0	60.4	37.8	1.8	-	
OD052400601	Language/Conventions	5.4	0.0	8.5	10.5	27.3	20.5	18.1	7.0	2.6	0.0	1.3	0.0	0.0	0.0	58.7	39.7	1.6	-	
OD052400601	Organization	5.4	0.0	12.2	9.4	24.7	18.2	20.0	7.5	2.5	0.0	1.3	0.0	0.0	0.0	61.7	36.4	1.9	-	
OD052400601	Sourcing	5.4	0.0	21.1	11.2	21.4	16.6	14.4	6.6	3.2	0.0	1.3	0.0	0.0	0.0	60.5	34.0	5.5	-	
OD052400601	Support	5.4	0.0	11.8	12.4	27.7	17.9	14.5	6.8	3.5	0.0	1.3	0.0	0.0	0.0	58.7	38.9	2.4	-	
OD052400602	Clarity/Coherence	5.2	0.0	7.8	11.2	29.6	18.8	18.6	5.7	3.0	0.0	2.1	0.0	0.0	0.0	56.7	40.1	3.2	-	
OD052400602	Language/Conventions	5.2	0.0	8.5	12.2	28.1	17.8	19.3	6.2	2.6	0.0	2.1	0.0	0.0	0.0	57.6	39.1	3.3	-	
OD052400602	Organization	5.2	0.0	13.6	9.9	25.3	16.9	20.1	6.4	2.5	0.0	2.1	0.0	0.0	0.0	61.1	35.5	3.4	-	
OD052400602	Sourcing	5.2	0.0	24.2	12.8	21.9	15.3	12.3	5.6	2.7	0.0	2.1	0.0	0.0	0.0	60.7	32.4	6.9	-	
OD052400602	Support	5.2	0.0	13.1	14.8	27.3	17.6	13.5	5.8	2.7	0.0	2.1	0.0	0.0	0.0	54.7	41.5	3.8	-	

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Grade 8 On-Demand Writing

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	9	10	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent
WR08914237248	Clarity/Coherence	6.8	0.0	18.1	9.4	25.9	14.5	16.9	5.8	2.5	0.2	5.5	0.2	0.3	0.8	69.3	29.6	1.1	83.8	
WR08914237248	Counterclaims	6.8	0.0	33.2	16.1	22.1	10.8	6.3	3.2	1.5	0.2	5.5	0.2	0.3	0.8	67.4	30.0	2.6	78.4	
WR08914237248	Language/Conventions	6.8	0.0	21.4	10.8	22.9	15.2	15.7	5.0	2.2	0.2	5.5	0.2	0.3	0.8	67.6	31.0	1.4	79.7	
WR08914237248	Organization	6.8	0.0	23.3	9.6	21.8	14.4	16.7	5.2	2.2	0.2	5.5	0.2	0.3	0.8	69.7	29.2	1.1	84.6	
WR08914237248	Sourcing	6.8	0.0	25.7	10.8	20.7	14.3	14.5	5.1	2.1	0.2	5.5	0.2	0.3	0.8	68.3	30.2	1.5	83.4	
WR08914237248	Support	6.8	0.0	23.5	9.9	25.8	15.5	12.2	4.4	1.8	0.2	5.5	0.2	0.3	0.8	68.8	29.7	1.5	82.0	
WR08914237493	Clarity/Coherence	2.6	0.0	11.8	7.0	25.6	15.0	23.1	10.0	4.9	0.1	1.9	0.1	0.1	0.4	67.0	32.0	1.0	85.5	
WR08914237493	Counterclaims	2.6	0.0	23.2	13.7	21.0	15.3	15.8	6.2	2.3	0.1	1.9	0.1	0.1	0.4	60.4	35.1	4.5	77.2	
WR08914237493	Language/Conventions	2.6	0.0	13.6	7.0	24.6	14.8	22.6	10.2	4.7	0.1	1.9	0.1	0.1	0.4	67.0	31.9	1.1	81.9	
WR08914237493	Organization	2.6	0.0	15.8	7.2	22.0	13.8	24.0	9.9	4.6	0.1	1.9	0.1	0.1	0.4	68.1	30.8	1.1	82.5	
WR08914237493	Sourcing	2.6	0.0	17.7	9.3	21.7	13.4	22.1	8.9	4.4	0.1	1.9	0.1	0.1	0.4	67.4	31.4	1.2	85.5	
WR08914237493	Support	2.6	0.0	14.6	7.0	25.8	14.0	22.5	8.8	4.7	0.1	1.9	0.1	0.1	0.4	69.1	29.8	1.1	85.5	
WR08914940322	Clarity/Coherence	2.6	0.0	11.2	5.4	30.3	12.7	24.9	9.0	3.9	0.2	1.9	0.0	0.2	0.4	72.5	27.1	0.4	79.4	
WR08914940322	Counterclaims	2.6	0.0	19.2	13.0	25.6	14.6	17.3	5.6	2.2	0.2	1.9	0.0	0.2	0.4	63.8	33.2	3.0	73.2	
WR08914940322	Language/Conventions	2.6	0.0	12.9	7.0	28.9	13.5	24.4	7.8	3.0	0.2	1.9	0.0	0.2	0.4	71.3	28.3	0.4	78.2	
WR08914940322	Organization	2.6	0.0	14.7	7.8	26.7	13.8	25.0	7.3	2.2	0.2	1.9	0.0	0.2	0.4	70.7	28.7	0.6	81.4	
WR08914940322	Sourcing	2.6	0.0	18.7	9.7	24.8	13.4	21.3	7.0	2.4	0.2	1.9	0.0	0.2	0.4	69.3	30.1	0.6	74.6	
WR08914940322	Support	2.6	0.0	13.7	5.6	32.1	11.4	22.8	8.0	3.8	0.2	1.9	0.0	0.2	0.4	74.5	25.0	0.5	82.6	
WR08914941248	Clarity/Coherence	2.2	0.0	11.9	7.9	30.1	14.9	19.6	8.5	4.9	0.2	1.4	0.1	0.2	0.4	67.7	31.2	1.1	83.6	
WR08914941248	Counterclaims	2.2	0.0	24.6	15.0	23.9	13.2	12.6	5.8	2.7	0.2	1.4	0.1	0.2	0.4	63.4	34.0	2.6	80.1	
WR08914941248	Language/Conventions	2.2	0.0	15.5	8.3	29.7	14.6	18.6	7.4	3.7	0.2	1.4	0.1	0.2	0.4	68.7	30.3	1.0	83.9	
WR08914941248	Organization	2.2	0.0	17.8	8.6	27.9	14.1	19.0	7.0	3.5	0.2	1.4	0.1	0.2	0.4	69.3	29.7	1.0	84.2	
WR08914941248	Sourcing	2.2	0.0	20.2	10.2	25.3	13.6	17.7	7.0	3.9	0.2	1.4	0.1	0.2	0.4	68.1	30.8	1.1	75.6	
WR08914941248	Support	2.2	0.0	17.7	8.6	31.3	13.8	17.0	6.3	3.2	0.2	1.4	0.1	0.2	0.4	70.5	28.6	0.9	84.6	

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement	
OD082400101	Clarity/Coherence	4.9	0.0	29.8	15.6	22.0	10.4	9.7	5.1	2.6	0.2	0.9	0.0	0.0	0.2	58.7	38.1	3.2	-	
OD082400101	Counterclaims	4.9	0.0	52.0	16.9	11.0	7.5	4.3	2.7	0.7	0.2	0.9	0.0	0.0	0.2	57.2	38.3	4.5	-	
OD082400101	Language/Conventions	4.9	0.0	32.7	14.9	19.1	11.1	9.6	5.1	2.4	0.2	0.9	0.0	0.0	0.2	57.0	39.0	4.0	-	
OD082400101	Organization	4.9	0.0	36.4	12.8	18.4	10.4	9.3	5.8	2.1	0.2	0.9	0.0	0.0	0.2	59.8	37.3	2.9	-	
OD082400101	Sourcing	4.9	0.0	41.3	11.0	14.1	9.3	10.4	6.2	2.9	0.2	0.9	0.0	0.0	0.2	59.4	36.4	4.2	-	
OD082400101	Support	4.9	0.0	34.1	14.8	20.7	10.3	8.6	4.9	1.6	0.2	0.9	0.0	0.0	0.2	57.6	39.0	3.4	-	
OD082400102	Clarity/Coherence	1.9	0.0	16.7	12.3	29.9	16.8	13.9	6.2	2.3	0.2	1.7	0.0	0.0	0.1	58.3	37.8	3.9	-	
OD082400102	Counterclaims	1.9	0.0	31.6	18.5	22.4	12.7	7.9	4.0	1.1	0.2	1.7	0.0	0.0	0.1	58.6	36.1	5.3	-	
OD082400102	Language/Conventions	1.9	0.0	16.0	13.0	27.9	17.9	15.1	6.0	2.3	0.2	1.7	0.0	0.0	0.1	57.5	38.2	4.3	-	
OD082400102	Organization	1.9	0.0	18.1	12.4	25.4	18.3	15.3	6.6	2.1	0.2	1.7	0.0	0.0	0.1	58.7	37.6	3.7	-	
OD082400102	Sourcing	1.9	0.0	23.7	11.6	19.3	15.5	17.1	7.8	3.0	0.2	1.7	0.0	0.0	0.1	60.2	35.5	4.3	-	
OD082400102	Support	1.9	0.0	18.5	14.9	29.5	16.0	11.5	6.2	1.6	0.2	1.7	0.0	0.0	0.1	59.1	37.0	3.9	-	
OD082400201	Clarity/Coherence	1.3	0.0	16.5	13.5	24.3	16.5	16.3	8.1	3.6	0.2	1.0	0.0	0.0	0.6	63.7	34.6	1.7	-	
OD082400201	Counterclaims	1.3	0.0	28.3	19.1	21.4	13.9	8.4	5.4	2.2	0.2	1.0	0.0	0.0	0.6	63.1	32.7	4.2	-	
OD082400201	Language/Conventions	1.3	0.0	18.2	14.0	23.8	17.7	14.7	7.4	3.0	0.2	1.0	0.0	0.0	0.6	60.3	37.3	2.4	-	
OD082400201	Organization	1.3	0.0	18.0	10.7	22.2	18.4	17.9	8.2	3.2	0.2	1.0	0.0	0.0	0.6	63.7	34.4	1.9	-	
OD082400201	Sourcing	1.3	0.0	22.7	12.6	17.6	16.1	17.8	7.7	4.2	0.2	1.0	0.0	0.0	0.6	62.2	35.0	2.8	-	
OD082400201	Support	1.3	0.0	19.1	14.1	24.1	18.4	13.3	6.6	3.0	0.2	1.0	0.0	0.0	0.6	63.0	34.4	2.6	-	
OD082400202	Clarity/Coherence	2.0	0.0	18.2	14.6	27.7	17.9	12.6	5.4	1.7	0.3	1.4	0.0	0.0	0.2	59.5	37.7	2.8	-	
OD082400202	Counterclaims	2.0	0.0	32.9	20.4	23.1	13.0	5.1	2.7	0.8	0.3	1.4	0.0	0.0	0.2	59.5	35.3	5.2	-	
OD082400202	Language/Conventions	2.0	0.0	19.4	15.2	26.7	18.3	12.0	4.8	1.6	0.3	1.4	0.0	0.0	0.2	59.4	37.5	3.1	-	
OD082400202	Organization	2.0	0.0	20.9	14.0	24.4	17.5	13.7	6.1	1.4	0.3	1.4	0.0	0.0	0.2	60.6	36.6	2.8	-	
OD082400202	Sourcing	2.0	0.0	28.1	13.1	20.6	16.8	12.2	5.6	1.6	0.3	1.4	0.0	0.0	0.2	60.1	36.0	3.9	-	
OD082400202	Support	2.0	0.0	20.8	15.9	28.9	16.1	10.0	5.0	1.2	0.3	1.4	0.0	0.0	0.2	59.0	37.8	3.2	-	

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement	
OD082400301	Clarity/Coherence	1.5	0.0	17.0	11.9	31.2	18.2	12.1	6.0	2.2	0.2	0.2	0.0	0.0	0.0	61.9	36.5	1.6	-	
OD082400301	Counterclaims	1.5	0.0	38.6	20.5	20.6	10.2	5.6	2.3	0.8	0.2	0.2	0.0	0.0	0.0	64.9	32.3	2.8	-	
OD082400301	Language/Conventions	1.5	0.0	15.6	13.4	30.0	18.9	13.2	5.7	1.8	0.2	0.2	0.0	0.0	0.0	60.8	37.4	1.8	-	
OD082400301	Organization	1.5	0.0	19.6	11.8	26.8	18.6	13.2	6.4	2.1	0.2	0.2	0.0	0.0	0.0	63.0	35.6	1.4	-	
OD082400301	Sourcing	1.5	0.0	24.0	11.8	20.9	17.4	13.9	7.7	2.7	0.2	0.2	0.0	0.0	0.0	63.0	34.2	2.8	-	
OD082400301	Support	1.5	0.0	19.5	14.1	30.4	17.9	9.8	5.2	1.6	0.2	0.2	0.0	0.0	0.0	62.7	35.2	2.1	-	
OD082400302	Clarity/Coherence	1.6	0.0	17.9	14.0	30.2	16.4	12.8	5.4	1.7	0.4	0.3	0.0	0.0	0.1	65.1	32.5	2.4	-	
OD082400302	Counterclaims	1.6	0.0	38.4	20.9	20.9	10.8	4.4	2.4	0.6	0.4	0.3	0.0	0.0	0.1	65.5	31.4	3.1	-	
OD082400302	Language/Conventions	1.6	0.0	19.0	15.5	27.0	17.6	12.8	4.8	1.7	0.4	0.3	0.0	0.0	0.1	61.5	36.7	1.8	-	
OD082400302	Organization	1.6	0.0	22.1	12.0	25.4	16.8	14.0	6.2	1.9	0.4	0.3	0.0	0.0	0.1	63.4	34.7	1.9	-	
OD082400302	Sourcing	1.6	0.0	27.2	12.5	19.2	16.2	14.0	7.1	2.2	0.4	0.3	0.0	0.0	0.1	62.5	34.8	2.7	-	
OD082400302	Support	1.6	0.0	21.5	16.2	28.3	16.4	10.4	4.4	1.2	0.4	0.3	0.0	0.0	0.1	62.2	35.9	1.9	-	
OD082400401	Clarity/Coherence	1.9	0.0	21.0	13.3	25.8	16.3	14.8	5.0	1.9	0.4	1.2	0.0	0.0	0.2	62.8	35.2	2.0	-	
OD082400401	Counterclaims	1.9	0.0	37.0	19.1	20.7	10.9	7.1	2.6	0.6	0.4	1.2	0.0	0.0	0.2	59.2	35.1	5.7	-	
OD082400401	Language/Conventions	1.9	0.0	19.8	16.2	24.6	16.5	14.7	4.7	1.7	0.4	1.2	0.0	0.0	0.2	60.9	36.7	2.4	-	
OD082400401	Organization	1.9	0.0	23.0	12.3	24.4	16.9	14.6	5.2	1.7	0.4	1.2	0.0	0.0	0.2	60.7	37.2	2.1	-	
OD082400401	Sourcing	1.9	0.0	28.8	12.6	18.1	16.8	13.8	5.8	2.2	0.4	1.2	0.0	0.0	0.2	61.4	34.9	3.7	-	
OD082400401	Support	1.9	0.0	23.1	15.4	27.0	14.7	12.2	4.4	1.4	0.4	1.2	0.0	0.0	0.2	59.7	37.0	3.3	-	
OD082400402	Clarity/Coherence	1.8	0.0	16.2	12.4	28.4	19.7	13.9	5.6	2.1	0.6	3.9	0.0	0.0	0.3	67.2	30.9	1.9	-	
OD082400402	Counterclaims	1.8	0.0	32.3	19.9	23.4	13.1	6.0	2.5	1.1	0.6	3.9	0.0	0.0	0.3	68.3	27.1	4.6	-	
OD082400402	Language/Conventions	1.8	0.0	17.4	14.1	27.4	18.5	13.9	5.0	2.0	0.6	3.9	0.0	0.0	0.3	66.9	31.2	1.9	-	
OD082400402	Organization	1.8	0.0	18.3	11.4	27.8	20.0	13.7	5.3	1.8	0.6	3.9	0.0	0.0	0.3	69.2	28.8	2.0	-	
OD082400402	Sourcing	1.8	0.0	23.4	11.8	22.9	19.1	13.6	5.1	2.3	0.6	3.9	0.0	0.0	0.3	70.7	26.4	2.9	-	
OD082400402	Support	1.8	0.0	19.1	14.8	28.1	18.1	11.5	4.9	1.7	0.6	3.9	0.0	0.0	0.3	67.2	29.9	2.9	-	

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	9	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement
OD082400501	Clarity/Coherence	0.4	0.0	19.0	15.2	29.1	16.3	13.4	5.0	1.6	0.1	1.1	0.0	0.0	0.3	61.3	36.0	2.7	-	
OD082400501	Counterclaims	0.4	0.0	34.5	17.3	23.9	12.1	7.9	3.0	1.0	0.1	1.1	0.0	0.0	0.3	60.5	32.9	6.6	-	
OD082400501	Language/Conventions	0.4	0.0	14.4	14.3	29.4	18.1	16.5	5.0	1.8	0.1	1.1	0.0	0.0	0.3	59.2	37.8	3.0	-	
OD082400501	Organization	0.4	0.0	19.7	12.2	26.1	18.3	16.8	5.2	1.4	0.1	1.1	0.0	0.0	0.3	60.3	36.7	3.0	-	
OD082400501	Sourcing	0.4	0.0	27.1	13.3	21.1	14.7	15.8	6.1	1.5	0.1	1.1	0.0	0.0	0.3	59.8	37.0	3.2	-	
OD082400501	Support	0.4	0.0	23.2	16.9	28.7	14.6	11.2	3.8	1.2	0.1	1.1	0.0	0.0	0.3	59.9	37.2	2.9	-	
OD082400502	Clarity/Coherence	0.8	0.0	21.9	11.3	25.7	13.8	15.1	7.5	3.8	0.4	1.4	0.0	0.0	0.0	61.4	35.7	2.9	-	
OD082400502	Counterclaims	0.8	0.0	34.3	13.3	23.1	13.8	8.8	4.5	1.5	0.4	1.4	0.0	0.0	0.0	60.5	34.0	5.5	-	
OD082400502	Language/Conventions	0.8	0.0	17.5	11.7	25.4	16.7	15.8	8.4	3.6	0.4	1.4	0.0	0.0	0.0	59.0	37.7	3.3	-	
OD082400502	Organization	0.8	0.0	20.2	11.0	23.5	15.5	17.8	8.4	2.9	0.4	1.4	0.0	0.0	0.0	62.3	34.8	2.9	-	
OD082400502	Sourcing	0.8	0.0	28.5	13.3	18.3	14.6	14.9	7.0	2.6	0.4	1.4	0.0	0.0	0.0	60.0	35.7	4.3	-	
OD082400502	Support	0.8	0.0	20.3	13.3	25.4	15.7	15.1	7.0	2.4	0.4	1.4	0.0	0.0	0.0	59.6	36.9	3.5	-	
OD082400601	Clarity/Coherence	1.4	0.0	17.5	14.3	30.1	16.1	14.5	4.6	1.4	0.3	1.0	0.0	0.0	0.2	63.2	35.0	1.8	-	
OD082400601	Counterclaims	1.4	0.0	32.1	19.4	23.8	13.0	7.2	2.6	0.6	0.3	1.0	0.0	0.0	0.2	61.3	34.8	3.9	-	
OD082400601	Language/Conventions	1.4	0.0	17.7	15.0	28.6	16.7	14.3	5.2	1.3	0.3	1.0	0.0	0.0	0.2	60.9	36.7	2.4	-	
OD082400601	Organization	1.4	0.0	20.7	12.1	27.4	17.0	15.6	4.7	1.2	0.3	1.0	0.0	0.0	0.2	64.0	33.6	2.4	-	
OD082400601	Sourcing	1.4	0.0	28.6	13.0	18.6	16.3	14.7	5.8	1.7	0.3	1.0	0.0	0.0	0.2	61.0	34.9	4.1	-	
OD082400601	Support	1.4	0.0	20.4	15.9	29.8	16.7	10.9	4.0	1.0	0.3	1.0	0.0	0.0	0.2	60.8	36.4	2.8	-	
OD082400602	Clarity/Coherence	1.0	0.0	15.0	11.6	29.7	17.3	16.2	6.2	3.1	0.2	0.5	0.0	0.0	0.3	63.9	35.0	1.1	-	
OD082400602	Counterclaims	1.0	0.0	31.4	16.6	25.3	12.4	9.2	3.1	1.0	0.2	0.5	0.0	0.0	0.3	64.8	32.0	3.2	-	
OD082400602	Language/Conventions	1.0	0.0	13.8	9.9	28.1	16.9	20.4	6.7	3.2	0.2	0.5	0.0	0.0	0.3	65.4	33.5	1.1	-	
OD082400602	Organization	1.0	0.0	20.0	10.0	25.7	17.4	17.8	5.3	2.8	0.2	0.5	0.0	0.0	0.3	66.4	32.6	1.0	-	
OD082400602	Sourcing	1.0	0.0	31.9	11.2	19.3	13.4	15.6	4.6	3.0	0.2	0.5	0.0	0.0	0.3	68.6	29.2	2.2	-	
OD082400602	Support	1.0	0.0	17.9	12.7	30.8	15.6	14.6	4.8	2.6	0.2	0.5	0.0	0.0	0.3	65.5	33.1	1.4	-	

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Grade 11 On-Demand Writing

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement	
WR11913555816	Clarity/Coherence	6.2	0.0	17.6	6.4	26.4	10.4	23.1	5.8	4.1	0.8	3.2	0.1	0.5	2.1	77.3	22.5	0.2	86.6	
WR11913555816	Counterclaims	6.2	0.0	28.3	14.2	19.4	11.9	12.6	4.7	2.7	0.8	3.2	0.1	0.5	2.1	67.8	30.5	1.7	82.4	
WR11913555816	Language/Conventions	6.2	0.0	14.1	7.0	27.7	11.3	23.4	6.1	4.2	0.8	3.2	0.1	0.5	2.1	75.3	24.3	0.4	84.5	
WR11913555816	Organization	6.2	0.0	20.5	7.3	23.6	10.1	23.1	5.4	3.7	0.8	3.2	0.1	0.5	2.1	77.0	22.6	0.4	88.9	
WR11913555816	Sourcing	6.2	0.0	36.7	9.2	13.8	9.4	15.3	5.9	3.5	0.8	3.2	0.1	0.5	2.1	74.3	24.3	1.4	84.7	
WR11913555816	Support	6.2	0.0	19.8	6.9	27.2	9.8	20.7	5.6	3.8	0.8	3.2	0.1	0.5	2.1	77.6	22.2	0.2	86.8	
WR11915549113	Clarity/Coherence	4.6	0.0	9.6	5.4	23.2	11.7	28.4	10.5	6.5	0.4	1.2	0.0	0.5	1.5	72.6	26.4	1.0	87.3	
WR11915549113	Counterclaims	4.6	0.0	19.2	15.0	21.6	14.8	15.2	6.3	3.3	0.4	1.2	0.0	0.5	1.5	62.8	34.3	2.9	80.4	
WR11915549113	Language/Conventions	4.6	0.0	7.9	5.1	24.9	12.8	26.6	11.3	6.9	0.4	1.2	0.0	0.5	1.5	73.5	25.6	0.9	86.7	
WR11915549113	Organization	4.6	0.0	12.4	6.7	21.2	12.1	28.7	8.8	5.6	0.4	1.2	0.0	0.5	1.5	74.0	25.0	1.0	85.5	
WR11915549113	Sourcing	4.6	0.0	31.3	9.6	11.7	12.1	18.8	8.0	3.9	0.4	1.2	0.0	0.5	1.5	70.3	27.6	2.1	83.1	
WR11915549113	Support	4.6	0.0	11.8	5.8	25.5	11.9	24.2	9.9	6.2	0.4	1.2	0.0	0.5	1.5	73.8	25.3	0.9	84.6	
WR11915549534	Clarity/Coherence	3.9	0.0	10.6	5.4	24.6	14.0	26.1	10.0	5.4	0.6	1.4	0.1	0.6	1.6	70.4	29.1	0.5	87.9	
WR11915549534	Counterclaims	3.9	0.0	25.6	14.7	18.9	12.9	13.6	7.7	2.8	0.6	1.4	0.1	0.6	1.6	60.1	35.0	4.9	79.0	
WR11915549534	Language/Conventions	3.9	0.0	9.2	5.6	25.4	13.9	26.8	9.5	5.6	0.6	1.4	0.1	0.6	1.6	70.5	28.9	0.6	86.1	
WR11915549534	Organization	3.9	0.0	13.8	7.0	24.2	12.2	24.1	9.7	5.0	0.6	1.4	0.1	0.6	1.6	70.6	28.7	0.7	87.9	
WR11915549534	Sourcing	3.9	0.0	28.2	12.8	11.8	11.2	17.9	10.0	4.3	0.6	1.4	0.1	0.6	1.6	63.9	33.6	2.5	85.2	
WR11915549534	Support	3.9	0.0	12.6	7.7	26.1	13.1	22.2	9.7	4.7	0.6	1.4	0.1	0.6	1.6	69.0	30.3	0.7	89.6	
WR11928456761	Clarity/Coherence	3.3	0.0	12.1	6.1	27.0	13.2	26.1	7.2	4.9	0.6	1.8	0.0	0.5	2.0	72.0	27.5	0.5	90.3	
WR11928456761	Counterclaims	3.3	0.0	26.9	16.7	19.9	12.9	12.8	4.9	2.6	0.6	1.8	0.0	0.5	2.0	61.3	35.8	2.9	74.8	
WR11928456761	Language/Conventions	3.3	0.0	9.4	5.4	27.7	13.1	28.7	7.3	5.1	0.6	1.8	0.0	0.5	2.0	70.2	29.0	0.8	89.9	
WR11928456761	Organization	3.3	0.0	15.7	6.2	25.0	12.1	26.5	6.9	4.4	0.6	1.8	0.0	0.5	2.0	71.8	27.4	0.8	89.9	
WR11928456761	Sourcing	3.3	0.0	29.3	9.7	14.5	11.3	21.2	6.7	4.0	0.6	1.8	0.0	0.5	2.0	65.5	29.5	5.0	86.2	
WR11928456761	Support	3.3	0.0	15.0	6.4	27.1	12.0	24.7	7.0	4.5	0.6	1.8	0.0	0.5	2.0	71.8	27.4	0.8	91.2	

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement	
OD112400101	Clarity/Coherence	4.7	0.0	28.4	9.8	24.2	10.9	12.7	5.4	4.0	1.1	1.1	0.0	0.0	0.7	64.4	34.0	1.6	-	
OD112400101	Counterclaims	4.7	0.0	44.3	13.2	15.9	8.5	6.9	3.5	2.9	1.1	1.1	0.0	0.0	0.7	60.5	31.5	8.0	-	
OD112400101	Lang/Conv	4.7	0.0	22.8	12.2	26.6	11.2	12.5	6.1	4.0	1.1	1.1	0.0	0.0	0.7	61.1	37.0	1.9	-	
OD112400101	Organization	4.7	0.0	30.8	9.7	22.4	10.4	12.6	5.5	3.9	1.1	1.1	0.0	0.0	0.7	65.1	33.1	1.8	-	
OD112400101	Sourcing	4.7	0.0	49.5	8.3	10.7	7.7	10.9	4.8	3.4	1.1	1.1	0.0	0.0	0.7	65.8	30.0	4.2	-	
OD112400101	Support	4.7	0.0	29.9	9.7	25.5	9.7	11.4	5.3	3.8	1.1	1.1	0.0	0.0	0.7	65.2	32.5	2.3	-	
OD112400102	Clarity/Coherence	2.6	0.0	15.7	7.9	25.9	14.6	19.4	8.3	5.5	0.8	0.7	0.0	0.0	0.7	66.2	32.8	1.0	-	
OD112400102	Counterclaims	2.6	0.0	33.2	12.6	19.9	10.8	11.5	5.6	3.8	0.8	0.7	0.0	0.0	0.7	60.3	31.2	8.5	-	
OD112400102	Lang/Conv	2.6	0.0	11.2	8.8	28.9	14.8	19.4	8.5	5.7	0.8	0.7	0.0	0.0	0.7	62.3	36.6	1.1	-	
OD112400102	Organization	2.6	0.0	17.9	7.4	24.9	14.0	19.5	8.4	5.3	0.8	0.7	0.0	0.0	0.7	66.2	33.0	0.8	-	
OD112400102	Sourcing	2.6	0.0	36.8	9.5	13.2	10.5	16.7	6.3	4.5	0.8	0.7	0.0	0.0	0.7	65.3	30.9	3.8	-	
OD112400102	Support	2.6	0.0	17.4	8.5	28.1	13.1	17.9	7.2	5.1	0.8	0.7	0.0	0.0	0.7	65.9	32.8	1.3	-	
OD112400201	Clarity/Coherence	1.9	0.0	15.6	5.6	28.2	14.6	20.2	8.4	5.5	0.7	0.5	0.0	0.0	0.8	69.6	28.8	1.6	-	
OD112400201	Counterclaims	1.9	0.0	32.2	14.4	19.5	12.0	10.8	5.6	3.7	0.7	0.5	0.0	0.0	0.8	59.7	32.4	7.9	-	
OD112400201	Lang/Conv	1.9	0.0	10.8	7.8	30.0	16.3	18.9	8.4	5.8	0.7	0.5	0.0	0.0	0.8	65.7	31.4	2.9	-	
OD112400201	Organization	1.9	0.0	17.4	6.3	26.3	14.3	20.0	8.0	5.7	0.7	0.5	0.0	0.0	0.8	67.5	30.6	1.9	-	
OD112400201	Sourcing	1.9	0.0	37.0	8.2	14.1	10.0	16.7	6.7	5.3	0.7	0.5	0.0	0.0	0.8	67.3	28.3	4.4	-	
OD112400201	Support	1.9	0.0	17.0	6.1	30.1	14.6	17.3	7.8	5.2	0.7	0.5	0.0	0.0	0.8	67.9	30.0	2.1	-	
OD112400202	Clarity/Coherence	2.0	0.0	12.2	6.6	27.3	12.5	22.6	9.9	6.8	0.9	0.7	0.0	0.0	0.5	66.2	32.6	1.2	-	
OD112400202	Counterclaims	2.0	0.0	29.3	15.4	21.4	11.1	11.1	5.9	3.8	0.9	0.7	0.0	0.0	0.5	60.1	33.6	6.3	-	
OD112400202	Lang/Conv	2.0	0.0	11.0	7.8	26.9	14.0	21.0	9.7	7.5	0.9	0.7	0.0	0.0	0.5	63.3	35.0	1.7	-	
OD112400202	Organization	2.0	0.0	15.7	7.2	23.9	13.1	20.9	10.4	6.8	0.9	0.7	0.0	0.0	0.5	68.4	30.4	1.2	-	
OD112400202	Sourcing	2.0	0.0	33.3	8.2	13.5	11.0	17.0	9.2	5.7	0.9	0.7	0.0	0.0	0.5	67.4	27.4	5.2	-	
OD112400202	Support	2.0	0.0	15.2	8.3	27.3	12.4	18.9	9.5	6.4	0.9	0.7	0.0	0.0	0.5	67.4	31.1	1.5	-	

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement	
OD112400301	Clarity/Coherence	1.9	0.0	13.1	8.5	25.7	14.3	21.1	9.9	5.5	0.8	0.4	0.0	0.0	0.6	68.6	30.4	1.0	-	
OD112400301	Counterclaims	1.9	0.0	28.4	16.2	20.9	11.3	11.7	6.2	3.5	0.8	0.4	0.0	0.0	0.6	61.7	33.0	5.3	-	
OD112400301	Lang/Conv	1.9	0.0	10.2	10.9	26.2	15.2	20.5	9.2	6.0	0.8	0.4	0.0	0.0	0.6	65.8	32.7	1.5	-	
OD112400301	Organization	1.9	0.0	16.4	7.2	24.9	13.1	21.1	10.1	5.4	0.8	0.4	0.0	0.0	0.6	68.5	30.4	1.1	-	
OD112400301	Sourcing	1.9	0.0	36.5	8.7	12.6	10.6	16.6	8.2	5.0	0.8	0.4	0.0	0.0	0.6	67.9	27.7	4.4	-	
OD112400301	Support	1.9	0.0	15.2	8.9	27.1	13.0	19.3	9.3	5.3	0.8	0.4	0.0	0.0	0.6	69.1	29.8	1.1	-	
OD112400302	Clarity/Coherence	1.6	0.0	13.0	7.1	28.0	16.4	21.9	7.7	4.3	0.9	0.3	0.0	0.0	0.9	66.8	31.6	1.6	-	
OD112400302	Counterclaims	1.6	0.0	24.1	16.9	22.6	13.4	13.6	4.8	3.0	0.9	0.3	0.0	0.0	0.9	62.5	32.5	5.0	-	
OD112400302	Lang/Conv	1.6	0.0	10.7	9.3	28.4	17.1	21.0	7.3	4.6	0.9	0.3	0.0	0.0	0.9	65.0	33.7	1.3	-	
OD112400302	Organization	1.6	0.0	15.6	7.3	25.5	15.7	21.8	8.0	4.4	0.9	0.3	0.0	0.0	0.9	68.5	30.7	0.8	-	
OD112400302	Sourcing	1.6	0.0	36.0	8.8	14.4	11.3	17.8	6.3	3.7	0.9	0.3	0.0	0.0	0.9	68.8	27.0	4.2	-	
OD112400302	Support	1.6	0.0	14.5	7.8	30.6	15.1	19.3	7.2	3.9	0.9	0.3	0.0	0.0	0.9	67.8	31.2	1.0	-	
OD112400501	Clarity/Coherence	2.3	0.0	14.6	6.6	30.4	14.7	20.0	7.5	4.0	1.2	0.3	0.0	0.0	0.5	68.3	31.0	0.7	-	
OD112400501	Counterclaims	2.3	0.0	25.3	16.8	22.8	12.6	12.3	5.3	2.5	1.2	0.3	0.0	0.0	0.5	60.8	34.7	4.5	-	
OD112400501	Lang/Conv	2.3	0.0	9.2	8.9	32.6	15.6	19.7	7.4	4.3	1.2	0.3	0.0	0.0	0.5	65.0	33.4	1.6	-	
OD112400501	Organization	2.3	0.0	16.4	6.2	29.4	14.2	20.2	7.1	4.1	1.2	0.3	0.0	0.0	0.5	68.6	30.8	0.6	-	
OD112400501	Sourcing	2.3	0.0	33.8	8.8	16.5	11.7	17.2	5.9	3.8	1.2	0.3	0.0	0.0	0.5	70.4	26.2	3.4	-	
OD112400501	Support	2.3	0.0	15.1	7.6	32.9	14.0	17.9	6.4	3.9	1.2	0.3	0.0	0.0	0.5	69.3	29.8	0.9	-	
OD112400502	Clarity/Coherence	2.5	0.0	16.6	10.1	23.8	13.6	16.5	10.5	6.4	1.0	1.0	0.0	0.0	0.6	70.5	28.6	0.9	-	
OD112400502	Counterclaims	2.5	0.0	35.1	16.8	16.3	9.3	9.8	5.7	4.5	1.0	1.0	0.0	0.0	0.6	61.4	34.4	4.2	-	
OD112400502	Lang/Conv	2.5	0.0	12.6	12.0	25.2	15.2	16.3	10.1	6.0	1.0	1.0	0.0	0.0	0.6	67.3	31.8	0.9	-	
OD112400502	Organization	2.5	0.0	19.7	9.4	21.2	13.4	16.8	10.4	6.5	1.0	1.0	0.0	0.0	0.6	71.5	27.4	1.1	-	
OD112400502	Sourcing	2.5	0.0	30.7	11.1	14.9	10.5	15.2	8.7	6.4	1.0	1.0	0.0	0.0	0.6	70.3	26.2	3.5	-	
OD112400502	Support	2.5	0.0	18.4	10.3	24.4	12.6	15.6	9.8	6.4	1.0	1.0	0.0	0.0	0.6	71.0	27.8	1.2	-	

Appendix M. On-Demand Writing Score Distribution and Rater Agreement

Prompt	Trait	Frequency Distribution of Final Trait Score %										Condition Code %					Inter-Rater Reliability			
		0	1	2	3	4	5	6	7	8	B	A	F	I	O	%Perfect Agreement	%Adjacent	%Non-Adjacent	Validity %Perfect Agreement	
OD112400601	Clarity/Coherence	1.9	0.0	16.4	8.1	24.1	15.1	19.1	9.7	5.7	2.0	2.7	0.0	0.0	0.6	73.7	25.8	0.5	-	
OD112400601	Counterclaims	1.9	0.0	38.0	17.2	16.2	8.5	9.5	5.6	3.2	2.0	2.7	0.0	0.0	0.6	71.4	24.9	3.7	-	
OD112400601	Lang/Conv	1.9	0.0	11.2	10.5	25.8	16.8	19.3	9.4	5.1	2.0	2.7	0.0	0.0	0.6	69.9	29.1	1.0	-	
OD112400601	Organization	1.9	0.0	20.2	7.8	21.0	15.4	18.2	10.1	5.5	2.0	2.7	0.0	0.0	0.6	74.1	25.4	0.5	-	
OD112400601	Sourcing	1.9	0.0	33.3	8.9	14.0	13.0	15.1	9.1	4.8	2.0	2.7	0.0	0.0	0.6	76.4	20.6	3.0	-	
OD112400601	Support	1.9	0.0	17.9	9.4	24.4	14.4	17.5	9.2	5.3	2.0	2.7	0.0	0.0	0.6	74.9	24.5	0.6	-	
OD112400602	Clarity/Coherence	1.6	0.0	13.0	6.7	26.3	15.3	23.8	8.4	5.0	0.9	1.0	0.0	0.0	0.7	68.2	30.8	1.0	-	
OD112400602	Counterclaims	1.6	0.0	28.3	13.8	18.5	13.6	14.4	5.6	4.2	0.9	1.0	0.0	0.0	0.7	65.5	28.9	5.6	-	
OD112400602	Lang/Conv	1.6	0.0	10.6	8.9	26.8	15.6	22.8	8.2	5.4	0.9	1.0	0.0	0.0	0.7	66.5	32.1	1.4	-	
OD112400602	Organization	1.6	0.0	15.6	7.6	24.0	15.0	23.3	7.9	5.1	0.9	1.0	0.0	0.0	0.7	69.2	29.8	1.0	-	
OD112400602	Sourcing	1.6	0.0	31.4	8.7	15.6	12.4	18.8	6.6	4.9	0.9	1.0	0.0	0.0	0.7	68.6	26.2	5.2	-	
OD112400602	Support	1.6	0.0	14.9	7.6	26.5	14.8	22.0	7.5	5.1	0.9	1.0	0.0	0.0	0.7	69.9	28.8	1.3	-	
WR11913554082	Clarity/Coherence	1.6	0.0	13.4	8.2	28.5	16.1	20.4	7.4	4.3	1.1	0.5	0.0	0.0	0.8	72.5	26.6	0.9	-	
WR11913554082	Counterclaims	1.6	0.0	28.4	15.3	20.8	11.5	13.5	5.7	3.1	1.1	0.5	0.0	0.0	0.8	63.1	30.7	6.2	-	
WR11913554082	Lang/Conv	1.6	0.0	11.4	9.6	26.5	15.6	21.9	8.7	4.6	1.1	0.5	0.0	0.0	0.8	69.9	29.0	1.1	-	
WR11913554082	Organization	1.6	0.0	16.0	8.5	24.0	14.0	22.7	8.3	4.7	1.1	0.5	0.0	0.0	0.8	72.7	26.4	0.9	-	
WR11913554082	Sourcing	1.6	0.0	34.0	8.9	14.3	10.9	18.6	7.3	4.3	1.1	0.5	0.0	0.0	0.8	70.5	25.3	4.2	-	
WR11913554082	Support	1.6	0.0	15.2	8.9	27.9	14.8	19.2	7.6	4.7	1.1	0.5	0.0	0.0	0.8	71.0	28.1	0.9	-	
WR11921950147	Clarity/Coherence	2.2	0.0	15.0	6.6	30.6	13.5	20.2	6.6	5.2	1.2	0.6	0.0	0.0	0.8	70.5	28.3	1.2	-	
WR11921950147	Counterclaims	2.2	0.0	35.3	16.2	17.0	10.1	11.6	4.4	3.1	1.2	0.6	0.0	0.0	0.8	62.1	31.7	6.2	-	
WR11921950147	Lang/Conv	2.2	0.0	10.7	7.9	32.7	13.6	20.1	7.5	5.2	1.2	0.6	0.0	0.0	0.8	66.6	32.2	1.2	-	
WR11921950147	Organization	2.2	0.0	16.8	7.2	28.9	12.7	20.5	6.7	5.0	1.2	0.6	0.0	0.0	0.8	70.3	28.4	1.3	-	
WR11921950147	Sourcing	2.2	0.0	38.7	10.6	13.3	9.1	16.0	5.7	4.4	1.2	0.6	0.0	0.0	0.8	70.8	24.7	4.5	-	
WR11921950147	Support	2.2	0.0	16.1	8.2	31.0	13.5	17.8	6.4	4.8	1.2	0.6	0.0	0.0	0.8	70.3	28.2	1.5	-	

Note. B = Non-Response; A = Insufficient Amount to Score; F = Non-English; I = Illegible; O = Off-Topic

Appendix N. Proficiency Classification Accuracy and Consistency

Subject	Grade	Accuracy (Overall)	Accuracy (Proficient/Non-Proficient)	Consistency	Kappa
Reading	3	71.51%	88.78%	61.78%	0.49
	4	71.64%	88.34%	61.76%	0.48
	5	72.55%	88.54%	62.72%	0.50
	6	70.84%	88.19%	60.98%	0.48
	7	70.31%	88.08%	60.54%	0.47
	8	71.74%	89.27%	62.92%	0.49
	10	71.80%	88.51%	62.11%	0.49
Mathematics	3	73.67%	89.50%	63.89%	0.50
	4	75.29%	89.75%	66.29%	0.54
	5	73.67%	89.65%	63.93%	0.50
	6	71.93%	89.11%	62.13%	0.48
	7	65.73%	86.47%	55.54%	0.39
	8	67.81%	88.28%	57.60%	0.42
	10	66.59%	87.17%	56.29%	0.40
Science	4	75.92%	86.91%	66.41%	0.45
	7	75.34%	89.86%	65.83%	0.49
	11	76.24%	91.03%	67.63%	0.50
Social Studies	5	71.04%	88.80%	61.56%	0.47
	8	73.40%	89.93%	64.64%	0.51
	11	74.08%	90.24%	65.18%	0.52
Editing and Mechanics	5	69.05%	87.74%	59.38%	0.46
	8	69.50%	86.99%	59.46%	0.45
	11	73.56%	89.09%	63.87%	0.50
On-Demand Writing	5	79.76%	91.48%	71.83%	0.61
	8	82.06%	93.04%	74.79%	0.65
	11	80.15%	93.60%	75.11%	0.64

Appendix O. Principal Components Analysis of Dimensionality

Subject	Grade	Unexplained Variance in 1st Contrast (Eigenvalue Units) ⁷
Reading	3	1.5
	4	1.6
	5	1.8
	6	1.6
	7	1.7
	8	1.5
	10	1.7
Mathematics	3	1.8
	4	1.6
	5	1.7
	6	1.5
	7	2.0
	8	2.0
	10	1.9
Science	4	1.6
	7	1.9
	11	2.3
Social Studies	5	1.8
	8	1.6
	11	1.9
Editing and Mechanics	5	1.9
	8	1.7
	11	1.8

⁷ Values greater than 2 may indicate a possible second dimension.

Appendix P. Model Fit Indices for Confirmatory Factor Analysis

Reading

Grade	Operational Set	SRMR	RMSEA	RMSEA 90% Lower CL	RMSEA 90% Upper CL
3	1	0.0150	0.0176	0.0172	0.0181
	2	0.0150	0.0188	0.0183	0.0192
4	1	0.0179	0.0234	0.0229	0.0239
	2	0.0148	0.0189	0.0184	0.0194
5	1	0.0199	0.0252	0.0247	0.0257
	2	0.0185	0.0236	0.0230	0.0241
6	1	0.0189	0.0237	0.0231	0.0242
	2	0.0177	0.0233	0.0228	0.0239
7	1	0.0194	0.0244	0.0239	0.0250
	2	0.0193	0.0244	0.0239	0.0250
8	1	0.0169	0.0223	0.0218	0.0228
	2	0.0182	0.0240	0.0235	0.0245
10	1	0.0196	0.0268	0.0264	0.0273
	2	0.0201	0.0274	0.0269	0.0279

Appendix P. Model Fit Indices for Confirmatory Factor Analysis

Mathematics

Grade	Operational Set	SRMR	RMSEA	RMSEA 90% Lower CL	RMSEA 90% Upper CL
3	1	0.0226	0.0254	0.0247	0.0261
	2	0.0241	0.0268	0.0261	0.0274
	3	0.0231	0.0272	0.0265	0.0278
	4	0.0209	0.0246	0.0239	0.0252
4	1	0.0280	0.0317	0.0310	0.0324
	2	0.0249	0.0279	0.0271	0.0286
	3	0.0273	0.0310	0.0303	0.0318
	4	0.0240	0.0270	0.0263	0.0278
5	1	0.0243	0.0315	0.0308	0.0323
	2	0.0294	0.0353	0.0346	0.0361
	3	0.0235	0.0289	0.0281	0.0296
	4	0.0264	0.0322	0.0315	0.0330
6	1	0.0151	0.0174	0.0167	0.0182
	2	0.0170	0.0199	0.0191	0.0206
	3	0.0169	0.0182	0.0175	0.0190
	4	0.0164	0.0173	0.0165	0.0181
7	1	0.0192	0.0209	0.0201	0.0217
	2	0.0183	0.0201	0.0194	0.0209
	3	0.0203	0.0229	0.0221	0.0237
	4	0.0200	0.0226	0.0218	0.0233
8	1	0.0209	0.0240	0.0233	0.0248
	2	0.0209	0.0242	0.0234	0.0249
	3	0.0169	0.0191	0.0183	0.0198
	4	0.0191	0.0221	0.0214	0.0229
10	1	0.0241	0.0266	0.0259	0.0274
	2	0.0238	0.0266	0.0259	0.0273
	3	0.0185	0.0202	0.0195	0.0209
	4	0.0201	0.0230	0.0222	0.0237

Appendix P. Model Fit Indices for Confirmatory Factor Analysis

Science

Grade	Operational Set	SRMR	RMSEA	RMSEA 90% Lower CL	RMSEA 90% Upper CL
4	1	0.0209	0.0186	0.0165	0.0207
	2	0.0239	0.0250	0.0230	0.0270
	3	0.0227	0.0222	0.0202	0.0243
	4	0.0219	0.0206	0.0184	0.0227
	5	0.0281	0.0302	0.0283	0.0321
	6	0.0218	0.0200	0.0178	0.0222
	7	0.0208	0.0217	0.0197	0.0237
	8	0.0224	0.0225	0.0204	0.0245
	9	0.0185	0.0152	0.0128	0.0175
	10	0.0209	0.0186	0.0164	0.0208
	11	0.0194	0.0155	0.0130	0.0179
	12	0.0199	0.0185	0.0163	0.0207
	13	0.0212	0.0209	0.0189	0.0230
	14	0.0236	0.0228	0.0207	0.0250
	15	0.0267	0.0285	0.0266	0.0305
7	1	0.0259	0.0240	0.0222	0.0257
	2	0.0274	0.0264	0.0246	0.0282
	3	0.0257	0.0248	0.0231	0.0266
	4	0.0259	0.0255	0.0237	0.0273
	5	0.0252	0.0235	0.0217	0.0254
	6	0.0220	0.0183	0.0163	0.0203
	7	0.0250	0.0248	0.0229	0.0266
	8	0.0218	0.0181	0.0159	0.0203
	9	0.0243	0.0242	0.0225	0.0260
	10	0.0235	0.0230	0.0212	0.0248
	11	0.0205	0.0164	0.0143	0.0185
	12	0.0225	0.0208	0.0189	0.0227
	13	0.0207	0.0166	0.0145	0.0187
	14	0.0217	0.0201	0.0183	0.0218
	15	0.0225	0.0210	0.0192	0.0228
11	1	0.0316	0.0320	0.0305	0.0336
	2	0.0231	0.0236	0.0219	0.0254
	3	0.0261	0.0254	0.0238	0.0271
	4	0.0237	0.0249	0.0233	0.0265
	5	0.0221	0.0195	0.0177	0.0213
	6	0.0293	0.0300	0.0282	0.0318
	7	0.0240	0.0227	0.0209	0.0245
	8	0.0247	0.0231	0.0213	0.0250
	9	0.0254	0.0263	0.0245	0.0281
	10	0.0226	0.0212	0.0194	0.0230

Appendix P. Model Fit Indices for Confirmatory Factor Analysis

Grade	Operational Set	SRMR	RMSEA	RMSEA 90% Lower CL	RMSEA 90% Upper CL
	11	0.0243	0.0263	0.0246	0.0279
	12	0.0237	0.0253	0.0236	0.0270
	13	0.0229	0.0245	0.0228	0.0261
	14	0.0248	0.0282	0.0266	0.0298
	15	0.0224	0.0240	0.0224	0.0256

Social Studies

Grade	Operational Set	SRMR	RMSEA	RMSEA 90% Lower CL	RMSEA 90% Upper CL
5	1	0.0155	0.0190	0.0185	0.0195
	2	0.0214	0.0247	0.0242	0.0252
8	1	0.0165	0.0219	0.0214	0.0224
	2	0.0160	0.0223	0.0217	0.0228
11	1	0.0224	0.0307	0.0302	0.0313
	2	0.0217	0.0304	0.0298	0.0309

Editing and Mechanics

Grade	Operational Set	SRMR	RMSEA	RMSEA 90% Lower CL	RMSEA 90% Upper CL
5	1	0.0418	0.0515	0.0509	0.0522
	2	0.0358	0.0440	0.0434	0.0447
8	1	0.0321	0.0365	0.0359	0.0372
	2	0.0256	0.0310	0.0303	0.0317
11	1	0.0299	0.0384	0.0377	0.0390
	2	0.0232	0.0300	0.0293	0.0306