APPENDIX C
TEST DESIGN AND BLUEPRINT SPECIFICATIONS

The following tables present the test design and blueprints for English language arts; they include numbers of items and total number of points for each item type. The percentage of points in each reporting category is also presented.

Distribution of ELA Common Items by Session and Item Type—Grade 3

Session	Number					Points				
	SR1	SR2	CR	ES	Total	SR1	SR2	CR	ES	Total
1	11	1	0	1	13	13		0	7	20
2	15	3	1	0	19	21		3	0	24
Total	26	4	1	1	32	34		3	7	44

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE, EBSR; 3 CR (hand scored); 7 ES (hand scored)

Reporting Categories	G3	
Language	25%	+/-5%
Reading	65%	+/-5%
Writing	10%	+/-5%
Totals	**100%**	

Distribution of ELA Common Items by Session and Item Type—Grade 4

Session	Number					Points				
	SR1	SR2	CR	ES	Total	SR1	SR2	CR	ES	Total
1	9	2	0	1	12	13		0	7	20
2	17	2	1	0	20	21		3	0	24
Total	26	4	1	1	32	34		3	7	44

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE, EBSR; 3 CR (hand scored); 7 ES (hand scored)

Reporting Categories	G4	
Language	25%	+/-5%
Reading	65%	+/-5%
Writing	10%	+/-5%
Totals	**100%**	

Distribution of ELA Common Items by Session and Item Type—Grade 5

Session	Number					Points				
	SR1	SR2	CR	ES	Total	SR1	SR2	CR	ES	Total
1	9	2	0	1	12	13		0	7	20
2	15	3	0	1	19	21		0	7	28
Total	24	5	0	2	31	34		0	14	48

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE, EBSR; 3 CR (hand scored); 7 ES (hand scored)

Reporting Categories	G5	
Language	25%	+/-5%
Reading	55%	+/-5%
Writing	20%	+/-5%
Totals	**100%**	

Distribution of ELA Common Items by Session and Item Type—Grades 6–8

Session	Number					Points				
	SR1	SR2	CR	ES	Total	SR1	SR2	CR	ES	Total
1	9	2	0	1	12	13	0		8	21
2	15	3	0	1	19	21	0		8	29
Total	24	5	0	2	31	34	0		16	50

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE, EBSR; 3 CR (hand scored); 7 ES (hand scored)

Reporting Categories	G6-8	
Language	25%	+/-5%
Reading	55%	+/-5%
Writing	20%	+/-5%
Totals	100%	

Distribution of ELA Common Items by Session and Item Type—Grade 10

Session	Number					Points				
	SR1	SR2	CR	ES	Total	SR1	SR2	CR	ES	Total
1	9	3	0	1	13	15	0		8	23
2	12	4	0	1	17	20	0		8	28
Total	21	7	0	2	30	35	0		16	51

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE, EBSR; 3 CR (hand scored); 7 ES (hand scored)

Reporting Categories	G10	
Language	25%	+/-5%
Reading	55%	+/-5%
Writing	20%	+/-5%
Totals	100%	

The following tables present the test design and blueprints for mathematics; they include numbers of items and total number of points for each item type. The percentage of points in each reporting category is also presented.

Distribution of Mathematics Common Items by Session and Item Type—Grade 3

Session	Number				Points			
	MS1	HS3	Matrix*	Total	MS1	HS3	Matrix*	Total
1	18	2	2	22	18	6	2	26
2	18	2	2	22	18	6	4	28
Total	36	4	4	44	36	12	6	54

* *Equating and/or Field Test) per form*

Item Types:	Max Points	Scored	
	1	MS1	SA/SR
	3	HS3	CR

Reporting Category		G3	
		Percents	Points
OA	Operations & Algebraic Thinking	30%	14–15
NBT	Number & Operations in Base Ten	15%	7–8
NF	Number & Operations-Fractions	20%	9–10
G	Geometry	10%	4–5
MD	Measurement & Data	25%	12

Distribution of Mathematics Common Items by Session and Item Type—Grades 4–5

Session	Number					Points				
	MS1	MS2	HS4	Matrix*	Total	MS1	MS2	HS4	Matrix*	Total
1	17	1	2	2	22	17	2	8	2–3	29–30
2	17	1	2	2	22	17	2	8	5–6	32–33
Total	34	2	4	4	44	34	4	16	7–8	61–62

* *Equating and/or Field Test) per form*

Item Types:	Max Points	Scored	
	1	MS1	SA/SR
	2	MS2	SA/SR
	4	HS4	CR

Reporting Category		G4		G5	
		Percents	**Points**	**Percents**	**Points**
OA	Operations & Algebraic Thinking	20%	10–11	15%	8
NBT	Number & Operations in Base Ten	20%	10–11	30%	16
NF	Number & Operations-Fractions	30%	16	25%	13–14
G	Geometry	10%	5–6	10%	5–6
MD	Measurement & Data	20%	10–11	20%	10–11

Distribution of Mathematics Common Items by Session and Item Type—Grade 6

Session			Number					Points		
	MS1	**MS2**	**HS4**	**Matrix***	**Total**	**MS1**	**MS2**	**HS4**	**Matrix***	**Total**
1	17	1	2	2	22	17	2	8	2–3	29–30
2	17	1	2	2	22	17	2	8	5–6	32–33
Total	34	2	4	4	44	34	4	16	7–8	61–62

* *Equating and/or Field Test) per form*

	Max Points	**Scored**	
Item Types:	1	MS1	SA/SR
	2	MS2	SA/SR
	4	HS4	CR

Reporting Category		G6	
		Percents	**Points**
RP	Ratios & Proportional Relationships	20%	10–11
NS	The Number System	20%	10–11
EE	Expressions & Equations	30%	16
G	Geometry	15%	8
SP	Statistics & Probability	15%	8

Distribution of Mathematics Common Items by Session and Item Type—Grade 7

Session			Number					Points		
	MS1	**MS2**	**HS4**	**Matrix***	**Total**	**MS1**	**MS2**	**HS4**	**Matrix***	**Total**
1	17	1	2	3	23	17	2	8	6–7	33–34
2	17	1	2	3	23	17	2	8	6–7	33–34
Total	34	2	4	6	46	34	4	16	12–14	66–68

* *Equating and/or Field Test) per form*

	Max Points	Scored	
Item Types:	1	MS1	SA/SR
	2	MS2	SA/SR
	4	HS4	CR

Reporting Category		G7	
		Percents	**Points**
RP	Ratios & Proportional Relationships	20%	10–11
NS	The Number System	20%	10–11
EE	Expressions & Equations	25%	13–14
G	Geometry	15%	8
SP	Statistics & Probability	20%	10–11

Distribution of Mathematics Common Items by Session and Item Type—Grade 8

Session	Number					Points				
	MS1	**MS2**	**HS4**	**Matrix***	**Total**	**MS1**	**MS2**	**HS4**	**Matrix***	**Total**
1	17	1	2	3	23	17	2	8	6–7	33–34
2	17	1	2	3	23	17	2	8	6–7	33–34
Total	34	2	4	6	46	34	4	16	12–14	66–68

* *Equating and/or Field Test) per form*

	Max Points	Scored	
Item Types:	1	MS1	SA/SR
	2	MS2	SA/SR
	4	HS4	OR

Reporting Category		G8	
		Percents	**Points**
NSEE	The Number System and Expressions & Equations	40%	21–22
F	Functions	20%	10–11
G	Geometry	30%	16
SP	Statistics & Probability	10%	5–6

Distribution of Mathematics Common Items by Session and Item Type—Grade 10

Session	MS1	MS2	Number HS4-OR	Matrix*	Total	MS1	MS2	Points HS4-OR	Matrix*	Total
1	16	3	2	6	27	16	6	8	10	40
2	16	3	2	6	27	16	6	8	10	40
Total	32	6	4	12	54	32	12	16	20	80

* Equating and/or Field Test) per form

Item Types:	Max Points	Scored	
	1	MS1	SA/SR
	2	MS2	SA/SR
	4	HS4	CR

Reporting Categories		G10	
		Percents	**Points**
NQ	Number & Quantity	15%	9
AF	Algebra & Functions	35%	21
G	Geometry	35%	21
SP	Statistics & Probability	15%	9

The following tables present the test design and blueprints for science, technology, and engineering; they include numbers of items and total number of points for each item type. The percentage of points in each reporting category is also presented. Additionally, the science practices are identified. Finally for introductory physics, the target percentage of points from items that are considered quantitative is provided.

Distribution of STE Common Items by Session and Item Type[1]—Grades 5 & 8 (Discrete)

Session	Number						Points					
	MS1	MS2	HS2	HS3	Matrix[2]	Total	MS1	MS2	HS2	HS3	Matrix*	Total
1	12	2	1	1	4	20	12	4	2	3	6	27
2	14	1	1	1	3	20	14	2	2	3	4	25
Total	26	3	2	2	7	40	26	6	4	6	10	52

1 *Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 6 points.*
2 *Equating and/or Field Test) per form; may also be modules*

Distribution of STE Common Items by Session and Item Type[1]—Grades 5 & 8 (Module/Stimulus)

Session	Number			Points		
	MS1	HS3	Total	MS1	HS3	Total
1	3	1	4	3	3	6
2	3	1	4	3	3	6
Total	6	2	8	6	6	12

1 *Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 6 points.*

Code	Reporting Category	Grade 5		Grade 8	
		% (+-5%)	Points	%	Points
ES	Earth and Space Science	25	12–14	25	12–14
LS	Life Science	25	12–14	25	12–14
PS	Physical Science	25	12–14	25	12–14
TE	Technology/Engineering	25	12–14	25	12–14

Code	Practice Category
A	Investigations and Questioning
B	Mathematics and Data
C	Evidence, Reasoning, and Modeling

Distribution of Biology Common Items by Session and Item Type[1]—Grade HS (Discrete)

Session			Number					Points		
	MS1	MS2	HS4	Matrix[2]	Total	MS1	MS2	HS4	Matrix*	Total
1	13	1	2	8	24	13	2	8	12	35
2	13	2	1	8	24	13	4	4	12	33
Total	26	3	3	16	48	26	6	12	24	68

1 *Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 6 points.*
2 *Equating and/or Field Test) per form; may also be modules*

Distribution of Biology Common Items by Session and Item Type[1]—Grade HS (Module/Stimulus)

Session		Number				Points		
	MS1	MS2	HS3	Total	MS1	MS2	HS3	Total
1	3	1	1	5	3	2	3	8
2	3	1	1	5	3	2	3	8
Total	6	2	2	10	6	4	6	16

1 *Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 6 points.*

Code	Reporting Category	%	Points
MO	Molecules to Organisms	35	21
HE	Heredity	25	15
EV	Evolution	20	12
EC	Ecology	20	12

Code	Practice Category
A	Investigations and Questioning
B	Mathematics and Data
C	Evidence, Reasoning, and Modeling

Distribution of Introductory Physics Common Items by Session and Item Type[1]—Grade HS (Discrete)

Session			Number					Points		
	MS1	MS2	HS4	Matrix[2]	Total	MS1	MS2	HS4	Matrix*	Total
1	13	1	2	8	24	13	2	8	12	35
2	13	2	1	8	24	13	4	4	12	33
Total	26	3	3	16	48	26	6	12	24	68

1 *Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 6 points.*
2 *Equating and/or Field Test) per form; may also be modules*

Distribution of Introductory Physics Common Items by Session and Item Type[1]—Grade HS (Module/Stimulus)

Session	Number				Points			
	MS1	MS2	HS3	Total	MS1	MS2	HS3	Total
1	3	1	1	5	3	2	3	8
2	3	1	1	5	3	2	3	8
Total	6	2	2	10	6	4	6	16

1 *Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 6 points.*

Code	Reporting Category	%	Points
MF	Motion, Forces, and Interactions	50	30
EN	Energy	30	18
WA	Waves	20	12

Code	Practice Category
A	Investigations and Questioning
B	Mathematics and Data
C	Evidence, Reasoning, and Modeling

Quantitative
35–50% of the test (by points) should be quantitative (21–30 points).