



Vermont Comprehensive Assessment Program (VTCAP)

Test Specifications Spring 2023

The new Vermont Comprehensive Assessment Program (VTCAP) will be administered in the spring of each academic school year, starting with Spring 2023, in the following subjects and grades:

- English Language Arts (ELA) Grades 3-9
- Mathematics Grades 3-9
- Science Grades 5, 8, and 11

The ELA and Mathematics assessments will assess the Common Core State Standards (CSSS) for English and Mathematics, respectively. The Science assessment will assess the Next Generation Science Standards (NGSS).

Practice tests will also be available in advance of the administration, with the following features:

- same item types as the operational assessment
- very similar content blueprint (percentage of points in each reporting category)
- similar total length/number of items (though note some practice tests may be divided into a different number of sessions than the operational assessment)
- TTS and ASL accommodations

Specifications for the assessment in each subject area are provided on the following pages.

ENGLISH LANGUAGE ARTS

English Language Arts (ELA) Assessment: Grades 3-9

Item Types

- MS-1 (Machine-Scored 1 point): 1 point; machine-scored multiple choice or multi-select interactions
- MS-2 (Machine-Scored 2 point): 2 points; machine-scored; two-part question; each part is a multiple-choice interaction
- WP (Writing Prompt): 7 points; human-scored; single prompt/passage-based; two multi-trait rubrics – Written Expression and Conventions

All ELA items are associated with passages/stimuli. For Reading, a set of items is administered with a single or paired passage. For Writing and Language (machine-scored items), a set of items is administered with an error-embedded passage. For Listening, a set of items is administered with an audio stimulus. For the Writing Prompt, the prompt is presented with a paired passage.

Operational Test Blueprint

The target distribution of content that will count towards student scores is presented in the table below.

English Language Arts			Grades 3-5		Grades 6-8		Grade 9	
			Target # Points	Target % Points	Target # Points	Target % Points	Target # Points	Target % Points
Reading & Listening	Text Type	Literary Text	15	52%	8	28%	10	29%
		Informational Text	8	28%	15	52%	18	53%
	Reading Cluster	<i>Key Ideas and Details</i>	9-11	31-38%	7-11	24-38%	11-13	32-38%
		<i>Craft and Structure</i>	7-9	24-31%	6-10	21-34%	9-11	26-32%
		<i>Integration of Knowledge and Ideas</i>	4-6	14-21%	4-6	14-21%	4-7	12-21%
	Listening		6	20%	6	20%	6	18%
	Total		29	100%	29	100%	34	100%
Writing & Language	W&L Passage Sets	Writing Analysis	9-11	41-50%	9-11	41-50%	6-9	23-35%
		English Language Conventions	3-5	14-23%	3-5	14-23%	9-12	35-46%
	Writing Prompt	Written Expression	4	18%	4	18%	4	15%
		Conventions	4	18%	4	18%	4	15%
	Total		22	100%	22	100%	26	100%

ENGLISH LANGUAGE ARTS

The target distribution of test points based on the Depth of Knowledge (DOK) of the items has separate specifications for Reading & Listening and Writing & Language.

	DOK	Percent of Test Points, Grades 3-9
Reading & Listening	Level 1	0-20%
	Level 2	50-70%
	Level 3	20-40%
	Total	100%
Writing & Language	Level 1	15-25%
	Level 2	40-60%
	Level 3	15-35%
	Total	100%

Student Testing Experience

The ELA Assessment is administered as an adaptive assessment, with the exception of Grade 9.

The number and types of items that will be administered to students are shown in the table below. Operational items count towards student scores, while field test items are “tryout” items that do not count toward student scores. The total number of items may vary slightly across administrations based on differences in the types of items associated with a passage set, e.g., MS-1 vs MS-2, but the total points determining the student score will always be the same.

	Grades 3-8				Grade 9			
	Passage Sets/ Stimuli	MS-1 & MS-2	WP	Total Items	Passage Sets/ Stimuli	MS-1 & MS-2	WP	Total Items
Operational Items	8	38-43	1	39-44	9	36-48	1	37-49
Field Test Items	2	12-13	0	12-13	2	12-13	0	12-13
Total Student Experience	10	50-56	1	51-57	11	48-61	1	49-62
Estimated Testing Time	Session 1: 60-65 min Session 2: 100-105 min Total: 160-170 min				Session 1: 60-65 min Session 2: 105-115 min Total: 160-180 min			

MATHEMATICS

Mathematics Assessment: Grades 3-9

Item Types

- MS-1 (Machine-Scored 1 point): 1 point; machine-scored multiple choice, multi-select, or technology-enhanced interactions
- CR-3 (Constructed Response 3 point): 3 points; human scored; two trait rubric – 2 points Concepts and Procedures, 1 point Mathematical Practices
- CR-6 (Constructed Response 6 point): 6 points; human scored; two trait rubric – 4 points Concepts and Procedures, 2 points Mathematical Practices

Operational Test Blueprint

The target distribution of content that will count towards student scores is presented in the tables below.

Grades 3-5

Mathematics		Grade 3		Grade 4		Grade 5		
		Target # Points	Target % Points	Target # Points	Target % Points	Target # Points	Target % Points	
Concepts and Procedures	Operations and Algebraic Thinking	12-18	24-35%	10-16	20-31%	7-11	14-22%	
	Number and Operations in Base Ten, Number and Operations – Fractions	<i>Number and Operations in Base Ten</i>	5-7	10-14%	8-10	16-20%	7-13	14-25%
		<i>Number and Operations – Fractions</i>	8-10	16-20%	10-16	20-31%	11-15	22-29%
		Total (NBT/NF)	13-17	25-33%	18-26	35-51%	18-28	35-55%
	Measurement and Data, Geometry	<i>Measurement and Data</i>	11-15	22-29%	6-10	12-20%	10-14	20-27%
		<i>Geometry</i>	3-5	6-10%	3-5	6-10%	4-8	8-16%
		Total (MD/G)	14-19	27-37%	9-14	18-27%	14-22	27-43%
	Subtotal		45	88%	45	88%	45	88%
Practices	Constructed Response Mathematical Practices*	6	12%	6	12%	6	12%	
Total		51	100%	51	100%	51	100%	

MATHEMATICS

Grades 6-8

Mathematics		Grade 6		Grade 7		Grade 8		
		Target # Points	Target % Points	Target # Points	Target % Points	Target # Points	Target % Points	
Concepts and Procedures	Ratios and Proportional Relationships	8-12	15-22%	8-12	15-22%			
	Functions					10-16	18-29%	
	The Number System, Expressions and Equations	<i>The Number System</i>	8-12	15-22%	6	11%	4	7%
		<i>Expressions and Equations</i>	8-12	15-22%	8-16	15-30%	11-17	20-31%
		Total (NS/EE)	16-24	30-44%	14-22	26-41%	15-21	27-38%
	Geometry and Statistics and Probability	<i>Geometry</i>	6-10	11-19%	6-10	11-19%	10-16	18-29%
		<i>Statistics and Probability</i>	6-10	11-19%	10-12	19-22%	10-12	18-22%
		Total (G/SP)	12-20	22-37%	16-22	30-41%	20-28	36-51%
Subtotal		48	89%	48	89%	49	89%	
Practices	Constructed Response Mathematical Practices**	6	11%	6	11%	6	11%	
Total		54	100%	54	100%	55	100%	

**Constructed response items (Grades 3-8) are scored for both Concepts and Procedures and Mathematical Practices. Across the 4 operational constructed response items in the test, a total of 6 points from the Mathematical Practices rubric are counted for the student's score.

Grade 9

Mathematics		Grade 9	
		Target # Points	Target % Points
Concepts and Procedures	Number and Quantity/Algebra	8-12	18-27%
	Algebra/Functions	14-18	31-40%
	Geometry	9-13	20-29%
	Statistics and Probability	6-10	13-20%
Total		45	100%

MATHEMATICS

The target distribution of test points based on the Depth of Knowledge (DOK) of the machine-scored items changes slightly across grades.

DOK	Percent of Test Points, Grades 3-6	Percent of Test Points, Grades 7-8	Percent of Test Points, Grade 9
Level 1	5-25%	0-30%	0-30%
Level 2	50-80%	50-80%	25-80%
Level 3	5-30%	5-30%	5-40%
Total	100%	100%	100%

Many of the mathematics items in the assessment are aligned to not only standards for Concepts and Procedures, but also Mathematical Practices. The proportion of test points also associated with various mathematical practices for Grades 3-8 is shown in the first table below. The second table shows the target for Grade 9, though in the first year there will not be reporting on mathematical practices.

Grades 3-8

Mathematical Practices	Test Points	Percent of Total Test Points, Grades 3-5	Percent of Total Test Points, Grades 6-7	Percent of Total Test Points, Grade 8
Problem Solving, Reasoning, and Argument	≥ 8	$\geq 16\%$	$\geq 15\%$	$\geq 15\%$
Modeling, Patterns, and Structure	≥ 8	$\geq 16\%$	$\geq 15\%$	$\geq 15\%$

Grade 9

Mathematical Practices	Test Points	Percent of Total Test Points, Grade 9
Argumentation and Modeling	≥ 8	$\geq 18\%$

MATHEMATICS

Student Testing Experience

The Mathematics Assessment is administered as an adaptive assessment, with the exception of Grade 9.

The number and types of items that will be administered to students are shown in the table below. Operational items count towards student scores, while field test items are “tryout” items that do not count toward student scores.

	Grades 3-5				Grades 6-7				Grade 8				Grade 9	
	MS-1	CR-3	CR-6	Total Items	MS-1	CR-3	CR-6	Total Items	MS-1	CR-3	CR-6	Total Items	MS-1	Total Items
Operational Items	33	2	2	37	36	2	2	40	37	2	2	41	45	45
Field Test Items	5	1		6	5	1		6	5	1		6	5	5
Total Student Experience	38	5		43	41	5		46	42	5		47	50	50
Estimated Testing Time	Session 1: 50-55 min Session 2: 60-65 min Total: 110-120 min				Session 1: 55-60 min Session 2: 60-65 min Total: 115-125 min				Session 1: 60-65 min Session 2: 60-65 min Total: 120-130 min				Session 1: 60-65 min Session 2: 60-65 min Total: 120-130 min	

SCIENCE

Science Assessment: Grades 5, 8, 11

Item Types

- MS-1 (Machine-Scored 1 point): 1 point; machine-scored multiple choice, multi-select, or technology-enhanced interactions
- MS-2 (Machine-Scored 2 point): 2 points; machine-scored; two-part question composed of a combination of two machine-scored interactions (multiple choice, multi-select, technology-enhanced)
- OE (Open Ended): 4 points; human-scored; holistic 0-4 score point rubric

All science items are multi-dimensional, aligning to at least two, if not all three, of the science dimensions (DCI, SEP, CCC) for the performance expectation.

Many science items are administered together in groupings called clusters, associated with a common phenomenon-based stimulus. Clusters are administered in all three science domains (Physical Sciences, Life Sciences, Earth and Space Sciences).

Operational Test Blueprint

The target distribution of content that will count towards student scores is presented in the table below.

Science	Grade 5		Grade 8		Grade 11	
	Target # Points	Target % Points	Target # Points	Target % Points	Target # Points	Target % Points
Physical Sciences	24-28	40%	20-24	35%	22-26	35%
Life Sciences	18-22	30%	20-24	35%	22-26	35%
Earth and Space Sciences	18-22	30%	18-22	30%	18-22	30%
Total	64	100%	64	100%	68	100%

Note items aligned to ETS standards are also assessed but because of the small number of standards in comparison to the total standards overall, ETS items are reported out within the reporting category for which the content domain matches the context of the design problem presented.

For Science, a Cognitive Complexity framework other than DOK is used. The framework rates the complexity of four indicators (stimulus, science and engineering practice, disciplinary core idea, crosscutting concept) as low, medium, or high. On a test form, all operational test points for each cognitive complexity level (low, medium, high) are summed across the four indicators. **At least 10% of the points should be high cognitive complexity and no more than 35% of the points should be low cognitive complexity.**

SCIENCE

Student Testing Experience

The Science Assessment is administered as an adaptive assessment.

The number and types of items that will be administered to students are shown in the table below. Operational items count towards student scores, while field test items are “tryout” items that do not count toward student scores.

	Grades 5, 8						Grade 11					
	Cluster Items			Standalone Items			Cluster Items			Standalone Items		
	Stim	MS-1	MS-2	MS-2	OE	Total Items	Stim	MS-1	MS-2	MS-2	OE	Total Items
Operational Items	6	12	12	8	3	35	6	12	12	10	3	37
Field Test Items	2	4	4	4	1	13	2	4	4	5	1	14
Total Student Experience	8	16	16	12	4	48	8	16	16	15	4	51
Estimated Testing Time	Session 1: 70-75 min Session 2: 70-75 min Total: 140-150 min						Session 1: 75-80 min Session 2: 75-80 min Total: 150-160 min					