# Vermont Comprehensive Assessment Program (VTCAP)

# Test Specifications

## Spring 2026

**English Language Arts | Mathematics**

Grades 3–9

**Science**

Grades 5, 8, & 11

# Contents

# Overview

## Assessments for English Language Arts, Mathematics and Science

The Vermont Comprehensive Assessment Program (VTCAP) is administered in the spring of each academic school year 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 language arts and mathematics, respectively. The Science assessment will assess the Next Generation Science Standards (NGSS).

The ELA assessments will focus on reading skills related to the comprehension and analysis of texts, the analysis of pieces of writing and knowledge of standard language conventions, listening skills, and the production of writing while using standard language conventions. The mathematics assessments will focus on applying skills and concepts and understanding multi-step problems that require abstract reasoning and modeling real-world problems, precision, perseverance, and strategic use of tools. The science assessments focus on important disciplinary core ideas, scientific and engineering practices (e.g., asking questions, developing and using models), and crosscutting concepts (e.g., patterns, cause and effect, stability and change) that apply across scientific disciplines.

## Accessibility and Accommodations

The VTCAP assessments in English language arts, math, and science include three types of accessibility features for students: universal tools, designated supports, and accommodations. Additional information about accessibility features can be found in the **VTCAP Accessibility and Accommodations Guidelines** on the Cognia help and support website.

## Lexile and Quantile Measurements

The Lexile Framework® for Reading, and the Quantile Framework® for Mathematics have been linked with the VTCAP English Language Arts and Mathematics assessments for grades 3–9. Lexile measures describe the complexity of text a student can read and comprehend independently, while Quantile measures indicate a student's readiness for specific mathematical skills and concepts. These measures can be used to match students with appropriately challenging reading and mathematics materials. Additional information is available on the Lexile® & Quantile® Hub website.

## Practice Tests

The practice tests allow students and staff to become familiar with the format and types of questions they will see on the VTCAP operational tests in ELA, mathematics, and science. The computer-based practice tests contain items that help familiarize students with the available tools and how to respond to different item types.

The VTCAP practice tests include the following features:

- item types that will appear in the operational assessment
- a very similar content blueprint (percentage of points in each reporting category)
- similar test length and number of items (though note some practice tests may be divided into a different number of sessions than the operational assessment)
- universal tools and calculators, as well as text to speech (TTS) and American Sign Language (ASL) versions of the test
- session directions similar to what will be seen in the operational assessment
- score reports showing student scores and responses for machine-scored items, as well as any responses to items that would require teacher scoring

Alignment documents with standards information and scoring rubrics provide additional information about the items on the practice test and human-scoring information.

A **Practice Test User Guide** is available on the Practice Test tab of the Vermont Help and Support website.

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

# English Language Arts (ELA) Assessment: Grades 3–9

## Content Standards

The ELA test content for VTCAP is based on the Common Core State Standards for each grade level, which guide both the test design and item development. Each item is text dependent and aligned to a specific content standard.

The test blueprints focus on close reading of complex texts and assess, to the extent possible, priority performance indicators across the Reading, Writing, Speaking & Listening, and Language strands, following national and state level guidance for high-quality assessments.

On the **Reading** portion of the ELA test, at all grade levels:

- the Reading standards for Literature that may be assessed include RL.1–6 and RL.9 (RL.7 is primarily assessed at grades 3–5).
- the Reading standards for Informational Text that may be assessed include RI.1–RI.9.

On the **Writing & Language** portion of the test,

- the Writing standards that may be assessed at grades 3–8 are W.1, W.2, and W.3 (including all associated sub-standards).
- the Writing standards that may be assessed at grade 9 are W.1, W.2, W.4, W.5, and W.8 (including all associated sub-standards).
- the Language standards that may be assessed at all grade levels are L.1–6 (including all associated sub-standards).

On the **Listening** portion of the test,

- the Speaking & Listening standards that may be assessed at all grade levels are SL.1, SL.2, and SL.3.

## Item Types

- MS-1 (Machine-Scored 1 point): 1 point; machine-scored multiple choice, multi-select, or technology-enhanced item interactions
- MS-2 (Machine-Scored 2 point): 2 points; machine-scored evidence-based selected response (two-part question; each part is a multiple-choice interaction), or technology-enhanced item interactions
- WP (Writing Prompt): 8 points; human-scored; single prompt/passage-based; two multi-trait rubrics – Written Expression and Conventions

All ELA items are associated with content-rich passages/stimuli at a range of complexity levels. 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 students can use to support their writing.

For additional information about the passages and stimuli on the ELA assessment, please reference the **VTCAP Stimulus Specifications** on the Cognia help and support website.

## Reporting Categories

The VTCAP ELA assessment content standards are grouped into subsets that are referred to as reporting categories. Students receive a scaled score and performance indicator for each reporting category.

The **scaled score** for each reporting category is calculated by estimating a student's performance on the VTCAP scale, using only the items aligned to that reporting category.

The scaled score for each reporting category is categorized into a **performance indicator** that has one of three levels—Below Standard, At/Near Standard, or Above Standard. Reporting category performance indicators reflect whether the student has met the expected performance on the standard(s).

For the ELA assessment, students will also receive **rubric scores** for *Written Expression* and *Conventions*, reflecting their performance on the writing prompt.

The ELA reporting categories for grades 3–9 are shown below.

- English Language Arts (scaled score)
  - Reading & Listening (scaled score)
    - Text Type – Literary Text (performance indicator)
    - Text Type – Informational Text (performance indicator)
  - Writing & Language (scaled score)
    - Writing Analysis & Language Conventions (performance indicator)
    - Written Expression (rubric score)
    - Conventions (rubric score)

## Operational Test Blueprint

The target distribution of content that will count toward 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* | *Key Ideas and Details* | *9-11* | *31-38%* | *7-11* | *24-38%* | *11-13* | *32-38%* |
| | | *Craft and Structure* | *7-9* | *24-31%* | *6-10* | *21-34%* | *9-11* | *26-32%* |
| | | *Integration of Knowledge and Ideas* | *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%** |

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.

The number and types of items that will be administered to students are shown in the table below. Operational items count toward 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<br>Session 2: 40-45 min<br>Session 3: 60 min<br>Total: 160-170 min | | | | Session 1: 60-65 min<br>Session 2: 45-55 min<br>Session 3: 60 min<br>Total: 165-180 min | | | |

# Mathematics Assessment: Grades 3–9

## Content Standards

The Mathematics test content for VTCAP is based on the Common Core State Standards for each grade level, which guide both the test design and item development. Each item is aligned to a specific content standard, and many items also assess a Mathematical Practice standard alongside a conceptual or procedural skill.

Not all standards are emphasized equally within a grade. Some clusters receive greater focus due to the complexity of the concepts, the time needed for mastery, and their importance for future learning or college and career readiness. The test blueprints prioritize the major work of each grade, while also addressing supporting and additional content, following national guidance for high-quality assessments (e.g., Student Achievement Partners).

The grades 3-8 Mathematics test may assess any of the Common Core State Standards for Mathematics at each grade. The grade 9 Mathematics test assesses a prioritized subset of the high school Common Core State Standards within the conceptual categories of Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability. However, not all standards are assessed in every administration. Each test includes a broad sample of standards, both within a single year and across multiple years, while adhering to the reporting category requirements in the test blueprints.

## Item Types

- MS-1 (Machine-Scored 1 point): 1 point; machine-scored multiple choice, multi-select, or technology-enhanced item interactions
- MS-2, MS-3 (Machine-Scored 2 point, 3 point): Grade 9 only; 2 or 3 points; machine-scored; multi-part question composed of a combination of machine-scored interactions (multiple choice, multi-select, technology-enhanced)
- CR-3 (Constructed Response 3 point): Grades 3-8; 3 points; human scored; two trait rubric – 2 points Concepts and Procedures, 1 point Mathematical Practices
- CR-6 (Constructed Response 6 point): Grades 3-8; 6 points; human scored; two trait rubric – 4 points Concepts and Procedures, 2 points Mathematical Practices

## Reporting Categories

The VTCAP mathematics assessment content standards are grouped into subsets that are referred to as reporting categories. Students receive a scaled score and performance indicator for each reporting category.

The **scaled score** for each reporting category is calculated by estimating a student's performance on the VTCAP scale, using only the items aligned to that reporting category.

The scaled score for each reporting category is categorized into a **performance indicator** that has one of three levels—Below Standard, At/Near Standard, or Above Standard. Reporting category performance indicators reflect whether the student has met the expected performance on the standard(s).

The mathematics reporting categories for grades 3–9 are shown below.

**Grades 3-5:**

- Mathematics (scaled score)
  - Operations and Algebraic Thinking (performance indicator)
  - Number and Operations in Base Ten, Numbers and Operations – Fractions (performance indicator)
  - Measurement and Data, Geometry (performance indicator)

**Grades 6-7:**

- Mathematics (scaled score)
  - Ratios and Proportional Relationships (performance indicator)
  - The Number System, Expressions and Equations (performance indicator)
  - Geometry and Statistics and Probability (performance indicator)

**Grade 8:**

- Mathematics (scaled score)
  - Functions (performance indicator)
  - The Number System, Expressions and Equations (performance indicator)
  - Geometry and Statistics and Probability (performance indicator)

**Grade 9:**

- Mathematics (scaled score)
  - Number and Quantity/Algebra (performance indicator)
  - Algebra/Functions (performance indicator)
  - Geometry (performance indicator)
  - Statistics and Probability (performance indicator)

**All grades:**

- Problem Solving, Reasoning, and Argument (performance indicator)
- Modeling, Patterns, and Structure Indicators (performance indicator)

## Operational Test Blueprint

The target distribution of content that will count toward 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** | *Number and Operations in Base Ten* | *5-7* | *10-14%* | *8-10* | *16-20%* | *7-13* | *14-25%* |
| | | *Number and Operations – Fractions* | *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** | *Measurement and Data* | *11-15* | *22-29%* | *6-10* | *12-20%* | *10-14* | *20-27%* |
| | | *Geometry* | *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%** |

## 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** | *The Number System* | *8-12* | *15-22%* | *6* | *11%* | *4* | *7%* |
| | | *Expressions and Equations* | *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** | *Geometry* | *6-10* | *11-19%* | *6-10* | *11-19%* | *10-16* | *18-29%* |
| | | *Statistics and Probability* | *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%** |

The target distribution of test points based on the Depth of Knowledge (DOK) of the machine-scored items changes 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% | 0-5% |
| 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 is shown in the table below. Note for grade 9, these are targets; if the target points are met the practices will be reported with testing results.

| Mathematical Practices | Test Points | Percent of Total Test Points, Grades 3-5 | Percent of Total Test Points, Grades 6-8 | Percent of Total Test Points, Grade 9 |
|---|---|---|---|---|
| Problem Solving, Reasoning, and Argument | $\geq$8 | $\geq$16% | $\geq$15% | $\geq$18% |
| Modeling, Patterns, and Structure | $\geq$8 | $\geq$16% | $\geq$15% | $\geq$18% |

## Student Testing Experience

The Mathematics 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 toward student scores, while field test items are “tryout” items that do not count toward student scores. For grade 9, the total number of items may vary slightly across administrations based on differences in the types of items, e.g., MS-1 vs MS-2 or MS-3, but the total points determining the student score will always be the same.

| | 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** | **MS-2/ MS-3** | **Total Items** |
| **Operational Items** | 33 | 2 | 2 | 37 | 36 | 2 | 2 | 40 | 37 | 2 | 2 | 41 | 36-45 | 0-3 | 39-45 |
| **Field Test Items** | 5 | 1 | | 6 | 5 | 1 | | 6 | 5 | 1 | | 6 | 10 | 0 | 10 |
| **Total Student Experience** | 38 | 5 | | 43 | 41 | 5 | | 46 | 42 | 5 | | 47 | 46-55 | 0-3 | 49-55 |
| **Estimated Testing Time** | Session 1: 50-55 min<br>Session 2: 60-65 min<br>Total: 110-120 min | | | | Session 1: 55-60 min<br>Session 2: 60-65 min<br>Total: 115-125 min | | | | Session 1: 60-65 min<br>Session 2: 60-65 min<br>Total: 120-130 min | | | | Session 1: 60-65 min<br>Session 2: 60-65 min<br>Total: 120-130 min | | |

# Science Assessment: Grades 5, 8, 11

## Content Standards

The Science test content for VTCAP is based on the Next Generation Science Standards (NGSS), which guide both the test design and item development. Note the Science tests are grade-band tests, meaning that the Grade 5 Science VTCAP may assess any of the NGSS for grades 3, 4, and 5; the Grade 8 science VTCAP may assesses any of the middle school NGSS; and the Grade 11 Science VTCAP may assess any of the high school NGSS.

Each item is designed to measure a specific standard, or performance expectation, and align to multiple dimensions of the standard (Disciplinary Core Idea, Science and Engineering Practice, Crosscutting Concept). All science items align to at least two, if not all three, of the dimensions for the performance expectation.

Because there are many standards in each grade band, not all standards can be assessed every year. Each test includes an appropriate sample of standards in alignment with the reporting category requirements in the test blueprints, and across multiple years all assessable standards are presented in the tests.

## Item Types

- MS-1 (Machine-Scored 1 point): 1 point; machine-scored; multiple choice, multi-select, or technology-enhanced item 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

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).

## Reporting Categories

The VTCAP Science assessment content standards are grouped into subsets that are referred to as reporting categories. Students receive a scaled score and performance indicator for each reporting category.

The **scaled score** for each reporting category is calculated by estimating a student's performance on the VTCAP scale, using only the items aligned to that reporting category.

The scaled score for each reporting category is categorized into a **performance indicator** that has one of three levels—Below Standard, At/Near Standard, or Above Standard. Reporting category performance indicators reflect whether the student has met the expected performance on the standard(s).

The Science reporting categories for grades 5, 8, and 11 are shown below.

Science (scaled score)

Practices and Crosscutting Concepts in Physical Sciences (performance indicator)

Practices and Crosscutting Concepts in Life Sciences (performance indicator)

Practices and Crosscutting Concepts in Earth and Space Sciences (performance indicator)

## Operational Test Blueprint

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

| Science Domain | 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.**

## 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 toward 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<br>Session 2: 70-75 min<br>Total: 140-150 min | | | | | | Session 1: 75-80 min<br>Session 2: 75-80 min<br>Total: 150-160 min | | | | | |

*Students taking an accommodated form will be administered the same number and types of items divided into three sessions, rather than two. In those cases, the timing is as follows:

| | |
|---|---|
| **Estimated Testing Time*** | Session 1: 50-55 min<br>Session 2: 50-55 min<br>Session 3: 50-55 min<br>Total: 150-165 min |