

CCSU Comprehensive Curriculum for Math

Grade Level 1

Power Standard #1 – Numbers and Operations: Students understand value and apply properties and operations of numbers. (Aligns with Vermont Standard 7.6)

Power Standard #2 – Geometric Figures: Students know and apply the attributes of geometric figures. (Aligns with Vermont Standard 7.7)

Power Standard #3 – Units of Measure: Students know and use units of measure. (Aligns with Vermont Standard 7.7)

Power Standard #4 – Patterns, Equations, and Inequalities: Students identify and extend patterns to express relationships between and among variables, and solve equations and inequalities. (Aligns with Vermont Standard 7.8)

Power Standard #5 – Data: Students represent, interpret, and predict using data. (Aligns with Vermont Standard 7.9)

Power Standard #6 – Probability: Students find probability theoretically and experimentally. (Aligns with Vermont Standard 7.9)

Power Standard #7 – Problem Solving: Students use a variety of approaches to solve problems and communicate solutions. (Aligns with Vermont Standard 7.10)

Grade Level 1, Power Standard 1

CCSU Power Standard #1: Students understand value and apply properties and operations of numbers. (Aligns with Vermont Standard 7.6)

Concepts to Emphasize: Addition/Subtraction, Sum/Difference, Estimate, Greater than/Less than, Zero, Number Model, Compare, Digit, Value, Order

Aligns with Vermont Standards	Vermont Grade Expectations Competency Focus	Focus and Learning Opportunities	CCSU Power Indicators Proficiency Focus
7.6	<p>M1: 1 Demonstrates conceptual understanding of rational numbers with respect to whole numbers from <u>0 to 100 using place value (a grouping system wherein a digit's place in a number denotes its value; e.g., in 34, 3 represents 3 tens, or 30); by applying the concepts of equivalency in composing or decomposing numbers (e.g., $12 = 7 + 5$); and in expanded notation (e.g., $41 = 4 \text{ tens} + 1 \text{ one}$ or $41 = 40 + 1$) using models, explanations, or other representations. Shows correct sequence of ordinal and cardinal numbers and compares cardinal numbers and</u></p> <p><u>positive fractional numbers (benchmark fractions: $a/2$, $a/3$, or $a/4$ where a is a whole number greater than 0 and less than or equal to the denominator) as part/whole relationships of benchmark fractions with models, diagrams, or written or verbal/scribed response.</u></p>	<p>Focus:</p> <ul style="list-style-type: none"> Count up and back by 1s Count up to 20 objects Write numerals from 1-20 Count by 2s to 20; count by 5s to 50 Count up and back by 1s on the number grid Shows correct sequence of ordinal numbers Understands place value for longs and cubes Find many names for a number Understand place value Identify and use patterns on a number grid Identify fractional parts of regions/sets of unit fraction Compare fraction less than 1 Find equivalent fractions <p>Learning Opportunities: Everyday Mathematics: 1.1, 1.2, 1.3, 1.4, 1.5, 1.7, 1.8 1.9, 1.10, 1.11, 1.13, 1.12, 2.1, 2.2, 2.3 2.4, 2.7, 2.9, 2.10, 2.13, 5.1, 5.2, 5.3, 5.4, 5.8, 5.9, 5.12, 5.13, 6.2, 6.3, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 9.6, 9.7, 9.8</p>	<p>Identify and name the value of each digit in a two-digit number (1a)</p> <p>Read and write numbers to 100 (1c)</p> <p>Count by 5's and 10's up to 100 beginning with 0 (1d)</p> <p>Identify $1/2$, $1/3$, and $1/4$ of a region and/or set (1g)</p>

7.6	<p>M1: 2 Demonstrates understanding of the relative magnitude of numbers <u>from 0 to 100</u> by ordering whole numbers; <u>by comparing whole numbers to each other or to benchmark numbers (10, 25, 50)</u>; by showing the relationship between whole numbers (1 more, 1 less; <u>10 more, 10 less</u>); <u>or by connecting number words and numerals to the quantities they represent using models, representations, or number lines.</u></p> <p>Apply number parameters consistent with M1: 1.</p>	<p>Focus:</p> <ul style="list-style-type: none"> • Compare pairs of numbers less than 16 • Determining 1, 10, more or less • Order and compare numbers • Compare numbers using ,< and > • Know +1, +0, doubles and sums of 10 	<p>Order and compare numbers up to 100 (1b)</p> <p>Solve addition and subtraction facts (1e)</p>
7.6	<p>M1: 3 Demonstrates conceptual understanding of mathematical operations involving addition and subtraction by solving problems involving situations in which one adds to, takes from, <u>puts together, and takes apart, or adds.</u></p>	<p>Focus:</p> <ul style="list-style-type: none"> • Solve problems with addition/subtraction number 	<p>Solve addition and subtraction facts (1e)</p>
7.6	<p>M1: 4 Accurately solves problems in <u>and out of context</u> involving addition and subtraction using whole numbers.</p>	<p>Focus</p> <ul style="list-style-type: none"> • Solve addition/subtraction number stories • Solve number stories by skip counting • Solve two-digit addition/subtraction problems <p>Learning Opportunities: Everyday Mathematics: 2.6, 2.7, 2.8, 2.10, 2.12, 2.13, 3.3, 3.4, 3.5, 3.6, 3.7, 3.9, 3.11, 3.12, 3.13, 4.3, 4.6, 4.7, 4.9, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11 , 8.4, 9.2, 9.3, 9.4</p>	

7.6	M1: 5 <u>Demonstrates understanding of monetary value</u> of coins and adds coins together to a value no greater than \$1.00.	<p>Focus</p> <ul style="list-style-type: none"> • Exchange pennies for nickels • Calculate values of penny/nickel combinations • Know value of coin combinations (nickels, pennies, dimes, quarters) • Make change for amounts < \$1 <p>Learning Opportunities Everyday Mathematics: 2.9, 2.10, 2.11, 2.12, 2.13, 3.2, 3.4, 3.10, 3.11, 3.12, 3.13, 4.3, 4.10, 6.8, 6.9, 6.10, 6.12, 8.1, 8.2, 8.5, 8.7</p>	Count mixed coins to \$1.00 (1f)
7.6	M1: 6 Mentally adds and subtracts whole-number facts through ten with accuracy.	<p>Focus:</p> <ul style="list-style-type: none"> • Knows addition facts <p>Learning Opportunities: Everyday Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.7, 6.11, 6.12, 7.2, 7.6, 8.8, 8.9</p>	Solve addition and subtraction facts (1e)
7.6	M1: 7 Estimates and evaluates the reasonableness of solutions appropriate to grade level.	<p>Focus:</p> <ul style="list-style-type: none"> • Estimates sums and differences 	
7.6	M1: 8 Applies properties of numbers (odd, even, composition/decomposition [5 is the same as 2 + 3]) and operations (commutative, identity) to solve problems and to simplify computations involving whole numbers.	<p>Focus:</p> <ul style="list-style-type: none"> • Find complements of 10 • Identify even/odd numerals <p>Learning Opportunities: Everyday Mathematics: 2.3, 2.10, 2.12, 3.2, 3.3, 3.4, 3.5, 3.13, 3.14</p>	

Grade Level 1, Power Standard 2

CCSU Power Standard #2: Students know and apply the attributes of geometric figures. (Aligns with Vermont Standard 7.7)

Concepts to Emphasize: polygon

Aligns with Vermont Standards	Vermont Grade Cluster Expectations Competency Focus	Focus and Learning Opportunities	CCSU Power Indicators Proficiency Focus
7.7	M1: 9 Uses attributes, composition, or decomposition to sort or classify <u>polygons</u> (triangles, squares, rectangles, <u>rhombi</u> , <u>trapezoids</u> , and <u>hexagons</u>) or objects by a <u>combination of two</u> nonmeasurable or measurable attributes. Recognizes and names <u>polygons</u> and circles in their environment.	<p>Focus:</p> <ul style="list-style-type: none"> Sort and identify objects by attribute Identify polygons and know characteristics <p>Learning Opportunities: Everyday Mathematics: 7.1, 7.2, 7.3, 7.4, 7.6, 7.7</p>	Sort and classify 2-dimensional geometric figures (pattern block shapes) by two or more attributes (2a)
7.7	M1: 10 No M1: 10 at this grade level		
7.7	M1: 11 Identifies objects in the environment given an example of a three-dimensional shape (e.g., show a wooden cylinder and students identify common objects of the same shape).	<p>Focus:</p> <ul style="list-style-type: none"> Identify 3-d shapes and know characteristics <p>Learning Opportunities: Everyday Mathematics: 7.5, 7.6</p>	
7.7	M1: 12 No M1: 12 at this grade level	<p>Focus:</p> <ul style="list-style-type: none"> Identify symmetrical figures <p>Learning Opportunities: Everyday Mathematics: 7.7</p>	

7.7	M1: 13 No M1: 13 at this grade level		
7.7	M1: 14 No M1: 14 at this grade level		
7.7	M1: 17 No M1: 17 at this grade level		
7.7	M1: 18 Find and name locations with simple relationships (i.e., near, far, above, below, next to, <u>up</u> , <u>down</u> , <u>right</u> , <u>left</u>).	<i>Focus:</i> <ul style="list-style-type: none"> • Find and name locations 	

Grade Level 1, Power Standard 3

CCSU Power Standard #3: Students know and use units of measure (See Appendix B). (Aligns with Vermont Standard 7.7)

Concepts to Emphasize: Length, Time, Temperature, Spatial Relationships (left, right, up, down)

Aligns with Vermont Standards	Vermont Grade Cluster Expectations Competency Focus	Focus and Learning Opportunities	CCSU Power Indicators Proficiency Focus
7.7	M1: 15 <u>Selects an appropriate tool with which to measure</u> length, temperature, weight, <u>and volume, and uses nonstandard units for linear measurement and weight.</u>	<p>Focus:</p> <ul style="list-style-type: none"> • Use standard units for length • Measure objects to nearest centimeter <p>Learning Opportunities Everyday Mathematics: 6.6, 6.7, 6.9</p>	<p>Measure length and weight using non-standard units (2b)</p> <p>Identify a tool to measure volume (2c)</p>
7.7	M1: 16 <u>Determines elapsed and accrued time as it relates to the patterns of days of the week, yesterday, today, tomorrow and tells time to the half hour.</u>	<p>Focus:</p> <ul style="list-style-type: none"> • Tell time to the nearest hour/half-hour • Elapsed time to the nearest half hour • Understands digital notation for time <p>Learning Opportunities Everyday Mathematics: 2.5, 2.6, 2.13, 3.5, 3.7, 3.8, 4.4, 4.5, 4.8, 4.9, 6.10, 6.11</p>	<p>Tell time to the half-hour (2a)</p>

Grade Level 1, Power Standard 4

CCSU Power Standard #4: Students identify and extend patterns to express relationships between and among variables, and solve equations and inequalities. (Aligns with Vermont Standard 7.8)

Concepts to Emphasize: Equal, Equation, Solve

Aligns with Vermont Standards	Vermont Grade Cluster Expectations Competency Focus	Focus and Learning Opportunities	CCSU Power Indicators Proficiency Focus
7.8	<p>M1: 19 Identifies and extends to specific cases a variety of patterns including sequences of shapes, sounds, movement, colors, letters, and numbers by extending the pattern to the next one, two, or three elements.</p>	<p>Focus:</p> <ul style="list-style-type: none"> • Count by 2s • Count by 5s • Identify and complete patterns • Complete frames/arrows diagrams • Find missing number/rule <p>Learning Opportunities: Everyday Mathematics: 1.4, 1.7, 1.9, 1.10, 1.11, 1.12, 1.13, 3.1, 3.2, 3.3, 3.4, 3.5, 3.8, 3.9, 3.11, 3.13, 3.14, 5.10, 5.12, 5.13</p>	Identify growing and repeating patterns with objects, shapes, numbers, etc. (4a)
7.8	<p>M1: 20 Demonstrates a conceptual understanding of linear relationships ($y = kx$) as a constant rate of change qualitatively (growth—student growing taller) and quantitatively (measurable growth—2 inches each year).</p>		
7.8	<p>M1: 21 No M1: 21 at this grade level</p>		

7.8	<p>M1: 22 Demonstrates conceptual understanding of equality by showing equivalence between two expressions ($4+1=5$; $2+3=5$) by solving one-step equations involving whole number addition or subtraction using models, verbal explanations, <u>or written equations</u>.</p>	<p>Focus:</p> <ul style="list-style-type: none"> • Find sums and missing addends • Understands equality between two expressions 	<p>Write equations for numbers less than 20 (4b)</p>
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Grade Level 1, Power Standard 5

CCSU Power Standard #5: Students represent, interpret, and predict using data. (Aligns with Vermont Standard 7.9)

Concepts to Emphasize: Table, Chart, Graph, Data

Aligns with Vermont Standards	Vermont Grade Cluster Expectations Competency Focus	Focus and Learning Opportunities	CCSU Power Indicators Proficiency Focus
7.9	<p>M1: 23 Interprets a given representation (models, tally charts, <u>pictographs with one-to-one correspondence, and tables</u>) through written or verbal/scribed response to answer questions related to the data, or to analyze the data to formulate conclusions.</p> <p>(IMPORTANT: <i>Analyzes data consistent with concepts and skills in M1: 24.</i>)</p>	<p>Focus:</p> <ul style="list-style-type: none"> • Write and count tallies <p>Learning Opportunities: Everyday Mathematics: 1.2, 1.7, 1.8, 1.12,</p>	<p>Record and count tally marks (5a)</p> <p>Interpret and analyze graphs, tables, and charts (5b)</p>
7.9	<p>M1: 24 Analyzes patterns, trends, or distributions in data in a variety of contexts using “more,” “less,” or “equal.”</p>		<p>Interpret and analyze graphs, tables, and charts (5b)</p>
7.9	<p>M1: 25 Organizes and displays data using diagrams, models, or tally charts through written or verbal/scribed response to answer questions related to the data, to analyze the data to formulate conclusions.</p> <p>(IMPORTANT: <i>Analyzes data consistent with concepts and skills in M1: 24.</i>)</p>		

Grade Level 1, Power Standard 6

CCSU Power Standard #6: Students find probability theoretically and experimentally. (Aligns with Vermont Standard 7.9)

Concepts to Emphasize: Likely

Aligns with Vermont Standards	Vermont Grade Cluster Expectations Competency Focus	Focus and Learning Opportunities	CCSU Power Indicators Proficiency Focus
7.9	M1: 26 No M1: 26 at this grade level		
7.9	M1: 27 For a probability event in which the sample space may or may not contain equally likely outcomes, uses experimental probability to describe the likelihood or chance of an event (using “more likely,” “less likely”).		Explore the probability of an event as more likely or less likely (6a)
7.9	M1: 28 In response to a teacher - or student-generated question or hypothesis, collects appropriate data <u>to answer the question or hypothesis being tested</u> through written or verbal/scribed response. (IMPORTANT: Analyzes data consistent with concepts and skills in MK: 24.)		
7.9	M1: 29 No M1: 29 at this grade level		

Grade Level 1, Power Standard 7

CCSU Power Standard #7: Students use a variety of approaches to solve problems and to communicate solutions. (Aligns with Vermont Standard 7.9)

Concepts to Emphasize: Reasonableness, Strategy

Aligns with Vermont Standards	Vermont Grade Cluster Expectations Competency Focus	Focus and Learning Opportunities	CCSU Power Indicators Proficiency Focus
7.9	<p>M2:30: Demonstrate understanding of mathematical problem solving and communication through:</p> <ul style="list-style-type: none"> • Approach & Reasoning -- The reasoning, strategies, and skills used to solve the problem; • Connections -- Demonstration of observations, applications, extensions, and generalizations; • Solution -- All of the work that was done to solve the problem, including the answer; • Mathematical Language -- The use of mathematical language in communicating the solution; • Mathematical Representation -- The use of mathematical representation to communicate the solution; and • Documentation -- Presentation of the solution. 	<p>Learning Opportunities: Everyday Mathematics Open Response (unit assessments)</p>	<p>Approach a problem correctly (7a)</p> <p>Provide solution with evidence (7b)</p> <p>Communicate mathematically (7c)</p>