

## CCSU Comprehensive Curriculum for Math

# Grade Level 6

**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 6, 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:** Percent, Rate, Ratio, Reciprocal, Integer, Power

| Aligns with Vermont Standards | Vermont Grade Expectations<br><i>Competency Focus</i>   | Focus and Learning Opportunities   | CCSU Power Indicators<br><i>Proficiency Focus</i> |
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| 7.6                           | <p><b>M6:1 Demonstrates conceptual understanding of rational numbers with respect to ratios</b> (comparison of two whole numbers by division <math>a/b</math>, <math>a : b</math>, and <math>a \div b</math>, where <math>b \neq 0</math>); and <b>rates</b> (e.g., a out of b, 25%) using models, explanations, or other representations.</p> <p><b>Demonstrates conceptual understanding of proportional reasoning</b>, and fluently moves between equivalent representations of commonly used fractions and decimals.</p> <p style="text-align: right;">M(N&amp;O)–6–1</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• ratios( <math>a/b</math>, <math>a:b</math>, <math>a</math> divided by <math>b</math>)</li> <li>• rates (a out of b, 25%)</li> <li>• fluency between equivalent representation (fraction–decimal)</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Bits &amp; Pieces I: 1.5, 2.2, 4.1, 5.1-5.3, 6.1-6.4</li> <li>• Bits &amp; Pieces II: 2.1</li> </ul>                                    | Compare two numbers using rates and ratios (1d)   |
| 7.6                           | <p><b>M6:2 Demonstrates understanding of the relative magnitude of numbers</b> by ordering or comparing <u>numbers with whole-number bases and whole-number exponents (e.g., <math>3^3</math>, <math>4^3</math>)</u>, integers, or <u>rational numbers</u> within and across number formats (fractions, decimals, or whole-number percents from 1 to 100) using number lines or <u>equality and inequality symbols</u>.</p> <p style="text-align: right;">M(N&amp;O)–6–2</p>  | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Comparing whole numbers and whole number exponents , integers or rational numbers               <ul style="list-style-type: none"> <li>○ across formats</li> <li>○ using number lines or equality and inequality symbols</li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Bits &amp; Pieces I: 2.2-2.5, 4.3, 5.1-5.3, 6.1-6.4</li> <li>• Bits &amp; Pieces II: 2.1</li> </ul> | Compare and order rational numbers (1f)           |

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| 7.6 | <p><b>M6:3 Demonstrates understanding of mathematical operations</b> by <u>describing or illustrating the meaning of a power by representing the relationship between the base (whole number) and the exponent (whole number) (e.g., 33 , 43 ); and the effect on the magnitude of a whole number when multiplying or dividing it by a whole number, decimal, or fraction.</u></p> <p style="text-align: right;">M(N&amp;O)–6–3</p>         | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Understanding of Powers</li> <li>• Relationship b/w base and exponents</li> <li>• Effects of magnitude on a number when multiplied by a: <ul style="list-style-type: none"> <li>○ whole number</li> <li>○ decimal</li> <li>○ fraction</li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Note: not in CMP</li> <li>• Incorporate during algebra unit</li> <li>• Incorporate after/during B&amp;P I and II</li> </ul> | <p>Demonstrate understanding of powers of numbers (1g)</p>  |
| 7.6 | <p><b>M6:4 Accurately solves problems involving single or multiple operations on fractions (proper, improper, and mixed), or decimals; and addition or subtraction of integers; percent of a whole; or problems involving greatest common factor or least common multiple.</b></p> <p>(IMPORTANT: <i>Applies the conventions of order of operations with and without parentheses.</i>)</p> <p style="text-align: right;">M(N&amp;O)–6–4</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• single or multiple operations on <u>fractions</u> (proper, improper, mixed) or <u>decimals</u> or <u>percents</u> and <u>integers</u>. <u>Including order of operations</u></li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• B&amp; P II: 2,3, 4,5,6, 7</li> <li>• Note: Order of operations is not in CMP 6</li> </ul>  | <p>Operate on fractions (1a)</p> <p>Operate on decimals (1b)</p> <p>Understand percent of a whole (0-100%) (1c)</p> <p>Add and subtract integers (1e)</p> <p>Apply conventions of order of operations including grouping symbols (1f)</p> |

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| 7.6 | <p><b>M6: 8 Applies properties of numbers</b> (factor, multiple, prime, composite, <u>greatest common factor [GCF]</u>, <u>least common multiple [LCM]</u>, composition/decomposition), divisibility, remainders), and <u>commutative and associative properties of operations</u> <b>to solve problems and to simplify computations.</b></p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Applies Properties of Numbers: <ul style="list-style-type: none"> <li>○ factor</li> <li>○ multiple</li> <li>○ prime/composite</li> <li>○ GCF/LCM</li> <li>○ composition/decomposition</li> <li>○ Divisibility</li> <li>○ Remainders</li> </ul> </li> <li>• Commutative and associative properties</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Incorporate during fraction work (during reducing, cross-cancel, and common denominator)</li> <li>• Incorporate commutative and associative properties during order of operations and Hands On Equations</li> </ul> | <p>Applies properties of numbers including GCF, LCM, commutative and associative (1h)</p> |
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## Grade Level 6, 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:** Congruency, Area, Circumference, Vertex

| Aligns with Vermont Standards | Vermont Grade Expectations<br><i>Competency Focus</i>  | Learning Opportunities  | CCSU Power Indicators<br><i>Proficiency Focus</i> |
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| 7.7                           | <p><b>M6: 9 Uses properties or attributes of angles</b> (right, acute, or obtuse) <b>or sides</b> (number of congruent sides, parallelism, or perpendicularity) <b>to identify, describe, classify, or distinguish</b> among different types of triangles (right, acute, obtuse, equiangular, <u>scalene</u>, <u>isosceles</u>, or equilateral) or quadrilaterals (rectangles, squares, rhombi, trapezoids, or parallelograms).</p> <p style="text-align: right;">M(G&amp;M)–6–1</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• attributes of angles (right., acute, obtuse)</li> <li>• attributes of sides               <ul style="list-style-type: none"> <li>○ number of congruent</li> <li>○ parallel</li> <li>○ perpendicular</li> </ul> </li> <li>• types of triangles</li> <li>• types of quadrilaterals</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• CMP: S &amp; D</li> <li>• Supplemental material during C &amp; S and/or Similar Figures</li> </ul> |   |
| 7.7                           | <p><b>M6: 11 Uses properties or attributes</b> (shape of bases, number of lateral faces, number of bases, <u>number of edges</u>, or <u>number of vertices</u>) <b>to identify, compare, or describe three-dimensional shapes</b> (rectangular prisms, triangular prisms, cylinders, spheres, pyramids, or cones).</p> <p style="text-align: right;">M(G&amp;M)–6–3</p>  | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• identify, compare, describe 3-D shapes based on number of:               <ul style="list-style-type: none"> <li>○ lateral faces</li> <li>○ bases</li> <li>○ edges</li> <li>○ vertices</li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Supplemental material during C&amp;S</li> </ul>   | Find volume of rectangular prisms (2c)            |

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| 7.7 | <p><b>M6: 12 Demonstrates congruency using the results of combining and subdividing shapes (e.g., rectangle into two triangles), by using transformations (flips, slides, and turns), and by using the properties of angles, and length of segments.</b></p>   | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate congruency by: <ul style="list-style-type: none"> <li>○ combine and subdivide shapes</li> <li>○ use flips and turns</li> <li>○ properties of angles and length of length of segments</li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• S&amp;D</li> <li>• Some in C&amp;S</li> <li>• Cartoon drawing</li> <li>• 7th grade S&amp;S</li> </ul> | <p>Demonstrate congruency using angle measures and side lengths (2a)</p>  |
| 7.7 | <p><b>M6: 13 Demonstrates conceptual understanding of similarity</b> by describing the proportional effect on the linear dimensions of polygons <u>or circles</u> when scaling up or down while preserving the angles of polygons, or by solving related problems (including applying scales on maps). Describes effects using models or explanations.<br/>M(G&amp;M)–6–5</p> <p><b>And applies concepts of similarity using constant of proportionality/scale factor to make larger and smaller scale drawings.</b></p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate similarity by: <ul style="list-style-type: none"> <li>○ effects on polygons and circles when scaling up or down</li> <li>○ use in problem solving (scales on maps)</li> <li>○ scale factor</li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Cartoon project</li> <li>• 7th grade S&amp;S</li> </ul>   |   |
| 7.7 | <p><b>M6: 14 Demonstrates conceptual understanding of perimeter</b> of polygons, <b>the area of quadrilaterals or triangles</b>, and <b>the volume of rectangular prisms</b> by using models, formulas, or by <u>solving problems</u>; and <b>demonstrates understanding of the relationships of circle measures</b> (radius to diameter and diameter to circumference) by <u>solving related problems</u>. Expresses all measures using appropriate units.<br/>M(G&amp;M)–6–6</p>                                       | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Perimeter - polygons</li> <li>• Area - triangle and quadrilateral</li> <li>• Volume - rectangular prism</li> <li>• Radius, diameter, circumference (relationship)</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• CMP C &amp; S</li> <li>• 7th grade F &amp; W covers volume</li> <li>• Supplement in 6th grade for volume after C&amp;S</li> </ul>                | <p>Find area of quadrilaterals and triangles using formulas (2b)</p> <p>Use circle measures (radius, diameter and circumference) (2d)</p> <p>Find volume of rectangular prisms (2c)</p> |

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| 7.7 | <b>M6: 18 Solves problems using the Cartesian coordinate system</b> (all quadrants) to locate coordinates and to represent data from tables. | <b>Focus:</b> <ul style="list-style-type: none"><li>• Locate points (x, y) on all quadrants</li><li>• Plot data from tables</li></ul> <b>Learning Opportunities:</b> <ul style="list-style-type: none"><li>• 7th grade CMP ATN</li><li>• Supplemental material</li></ul> |  |
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## Grade Level 6, Power Standard 3

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

**Concepts to Emphasize:** Perimeter / Area / Volume, Units / Units<sup>2</sup> / Units<sup>3</sup>

| Aligns with Vermont Standards | Vermont Grade Cluster Expectations<br><i>Competency Focus</i>  | Learning Opportunities   | CCSU Power Indicators<br><i>Proficiency Focus</i>               |
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| 7.7                           | <p><b>M6: 15 Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems</b> across the content strands. (Benchmarks in Appendix B.)</p> <p style="text-align: right;">M(G&amp;M)–6–7</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Measures appropriately</li> <li>• Conversion w/in systems</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Supplemental material</li> </ul> | <p>Label units when finding perimeter, area and volume (3a)</p> |
| 7.7                           | <p><b>M6: 16</b> No <b>M6: 16</b> at this grade level</p>  |  |   |

## Grade Level 6, Power Standard 4

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

**Concepts to Emphasize:** Solve, Equation, Variable, Linear graph

| Aligns with Vermont Standards | Vermont Grade Cluster Expectations<br><i>Competency Focus</i>   | Learning Opportunities   | CCSU Power Indicators<br><i>Proficiency Focus</i>        |
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| 7.8                           | <p><b>M6: 19 Identifies and extends to specific cases a variety of patterns</b> (linear and nonlinear) represented in models, tables, sequences, <u>graphs</u>, or in problem situations; or writes a rule in words or symbols for finding specific cases of a linear relationship; or <u>writes a rule in words or symbols for finding specific cases of a nonlinear relationship</u>; and <u>writes an expression or equation using words or symbols to express the generalization of a linear relationship</u> (e.g., twice the term number plus 1 or <math>2n + 1</math>).</p> <p style="text-align: right;">M(F&amp;A)–6–1</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>identifies patterns ~ linear and non-linear</li> <li>represents pattern in – model, table and graph</li> <li>writes a rule (words and symbols)</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>Variables and Patterns Inv. 1, 2</li> <li>Supplemental materials</li> <li>Guess My Rule lesson</li> </ul> | Generalize linear relationships in words or symbols (4a) |

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| 7.8 | <p><b>M6:20 Demonstrates conceptual understanding of linear relationships</b> (<math>y = kx</math>; <math>y = mx + b</math>) as a <b>constant rate of change</b> by constructing or interpreting graphs of real occurrences and describing the slope of linear relationships (faster, slower, greater, or smaller) in a variety of problem situations; <b>and describes how change in the value of one variable relates to change in the value of a second variable</b> in problem situations with constant rates of change.</p> <p>M(F&amp;A)–6–2</p>                 | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Conceptual understanding of linear relationships <math>y=mx+b</math> <ul style="list-style-type: none"> <li>○ construct/interpret graph</li> <li>○ slope</li> <li>○ effects of changing one variable on the other</li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Algebra Patterns</li> <li>• During Guess My Rule, change one variable, graph, and discuss</li> <li>• CMP 7th grade V&amp;P</li> </ul> | Identify a constant rate of change for tables and graphs (4b)                            |
| 7.8 | <p><b>M6:21 Demonstrates conceptual understanding of algebraic expressions</b> by using letters to represent unknown quantities to write linear algebraic expressions involving two or more of the four operations and consistent with order of operations expected at this grade level; or by evaluating linear algebraic expressions (including those with more than one variable); or by evaluating an expression within an equation (e.g., determine the value of <math>y</math> when <math>x = 4</math> given <math>y = 3x - 2</math>).</p> <p>M(F&amp;A)–6–3</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Able to write, evaluate, understand algebraic expressions <ul style="list-style-type: none"> <li>○ all four operations</li> <li>○ more than one variable</li> </ul> </li> </ul>   | Evaluate expressions using order of operations consistent with this grade level. (4c)    |
| 7.8 | <p><b>M6:22 Demonstrates conceptual understanding of equality</b> by showing equivalence between two expressions using models or different representations of the expressions (expressions consistent with the parameters of M(F&amp;A)–6–3), solving multistep linear equations of the form <math>ax \pm b = c</math>, where <math>a</math>, <math>b</math>, and <math>c</math> are whole numbers with <math>a \neq 0</math>.</p> <p>M(F&amp;A)–6–4</p>   | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Able to show/prove two expressions are equal <ul style="list-style-type: none"> <li>○ multi step linear equations<br/>ex: <math>2x+x+x+5 = 2(2x) + 12 - 7</math></li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Hands on Equations lessons 1-25</li> </ul>   | Solve two step equations $AX \pm B = C$ where $A$ , $B$ , and $C$ are whole numbers (4d) |

## Grade Level 6, Power Standard 5

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

Concepts to Emphasize: Stem and leaf plot

| Aligns with Vermont Standards | Vermont Grade Cluster Expectations<br><i>Competency Focus</i>  | Learning Opportunities   | CCSU Power Indicators<br><i>Proficiency Focus</i>  |
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| 7.9                           | <p><b>M6:23 Interprets a given representation</b> (circle graphs, line graphs, or stem-and-leaf plots) to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems.</p> <p>(IMPORTANT: <i>Analyzes data consistent with concepts and skills in M6:24</i>)</p> <p style="text-align: right;">M(DSP)-6-1</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Interpret data on</li> <li>• Analyze data</li> <li>• Form/justify conclusions</li> <li>• Make predication</li> <li>• And solve problems from:               <ul style="list-style-type: none"> <li>○ circle graph</li> <li>○ line graph</li> <li>○ stem-leaf plot</li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• small section on circle graphs in B&amp;P</li> <li>• small section on line graph during Algebra Patterns (Guess My Rule)</li> <li>• need to supplement for stem- leaf</li> </ul> | <p>Create and interpret stem and leaf plots (5a)</p> <p>Organize data using a circle graph according to benchmark percentages (5b)</p> |
| 7.9                           | <p><b>M6:24 Analyzes patterns, trends or distributions in data in a variety of contexts by determining or using</b> measures of central tendency (mean, median, or mode) or <u>dispersion (range)</u> to analyze situations, or to solve problems.</p> <p style="text-align: right;">M(DSP)-6-2</p>  | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Mean, Median, Mode (review)</li> <li>• Range (new)</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• 1 ACE question in CMP</li> </ul>  |  |

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| 7.9 | <p><b>M6:25 Organizes and displays data using</b> bar graphs, tables, frequency tables, line plots, <u>circle graphs</u>, and stem-and-leaf plots to answer question related to the data, to analyze the data to formulate or justify conclusions, or to make predictions.</p> <p>(IMPORTANT: Analyzes data consistent with concepts and skills in M6:24)</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Organize data to justify conclusion <ul style="list-style-type: none"> <li>○ graphs</li> <li>○ tables</li> <li>○ line plots</li> <li>○ stem-leaf plots</li> </ul> </li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Algebra Patterns Lessons</li> <li>• Tables in C&amp;S</li> <li>• Supplement for stem-leaf plots</li> <li>• Portfolio questions</li> </ul> | <p>Create and interpret stem and leaf plots (5a)</p> <p>Organize data using a circle graph according to benchmark percentages (5b)</p> |
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## Grade Level 6, Power Standard 6

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

**Concepts to Emphasize:** Fundamental Counting Principle, Fair / Unfair game

| Aligns with Vermont Standards | Vermont Grade Cluster Expectations<br><i>Competency Focus</i>  | Learning Opportunities  | CCSU Power Indicators<br><i>Proficiency Focus</i>        |
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| 7.9                           | <p>M6:26 Uses counting techniques to solve problems in context involving combinations or simple permutations using a variety of strategies (e.g., organized lists, tables, tree diagrams, models, Fundamental Counting Principle, or others).</p> <p style="text-align: right;">M(DSP)–6–4</p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Combinations</li> <li>• Permutations</li> <li>• lists, tables, tree diagrams, model</li> <li>• Counting Principle</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• 7th grade CMP-What Do you Expect?</li> <li>• 6th grade CMP - How Likely Is It?</li> </ul> | Use the fundamental counting principle (6a)              |
| 7.9                           | <p><b>M6:27 For a probability event in which the sample space may or may not contain equally likely outcomes, determines the experimental or theoretical probability of an <u>event in a problem solving situation</u>.</b></p> <p style="text-align: right;">M(DSP)–6–5</p>                   | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Experimental Probability vs. Theoretical Probability</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• CMP – How Likely Is It?</li> </ul>   | Apply experimental probability (design a fair game) (6b) |

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| 7.9 | <p><b>M6:28 In response to a teacher- or student-generated question, <u>makes a hypothesis</u>, collects appropriate data, organizes the data, appropriately displays/represents numerical and/or categorical data, analyzes the data to draw conclusions about the questions or hypothesis being tested, and when appropriate makes predictions, asks new questions, or makes connection to real-world situations.</b></p> <p><i>(IMPORTANT: Analyzes data consistent with concepts and skills in M6:24)</i></p> | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Make Hypothesis</li> <li>• Collect/organize data</li> <li>• Analyze data</li> <li>• Make conclusions</li> <li>• Make predictions</li> <li>• Make connections to real-world</li> </ul>   | Apply experimental probability (design a fair game) (6b) |
| 7.9 | <p><b>M6:29 Uses experimental probability to <u>make and test conjectures or design fair games</u>. <u>Represent probabilities using fractions, decimals, or percents.</u></b></p>  | <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Probability to test “fairness”</li> <li>• Show/prove using fractions, decimals, percents</li> </ul> <p><b>Learning Opportunities:</b></p> <ul style="list-style-type: none"> <li>• 7th grade CMP – What do you Expect?</li> </ul> | Apply experimental probability (design a fair game) (6b) |

## Grade Level 6, Power Standard 7

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

**Concepts to Emphasize:** Reasonableness

| Aligns with Vermont Standards | Vermont Grade Cluster Expectations<br><i>Competency Focus</i>  | Learning Opportunities   | CCSU Power Indicators<br><i>Proficiency Focus</i>  |
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| 7.9                           | <p><b>M6:30 Demonstrate understanding of mathematical problem solving and communication through:</b></p> <ul style="list-style-type: none"> <li>• <b>Approach &amp; Reasoning</b>—The reasoning, strategies, and skills used to solve the problem;</li> <li>• <b>Connections</b>—Demonstration of observations, applications, extensions, and generalizations;</li> <li>• <b>Solution</b>—All of the work that was done to solve the problem, including the answer;</li> <li>• <b>Mathematical Language</b>—The use of mathematical language in communicating the solution;</li> <li>• <b>Mathematical Representation</b>—The use of mathematical representation to communicate the solution; and</li> <li>• <b>Documentation</b>—Presentation of the solution.</li> </ul> | <p><b>Learning Opportunities:</b><br/>4 problem solving pieces</p> | <p>Approach a problem correctly (7a)</p> <p>Provide solution with evidence (7b)</p> <p>Communicate mathematically (7c)</p> |