

Mathematics Curriculum Topic Study
Alignment of CTS Topics to the NCTM PK-8 Focal Points

Kindergarten

- Number and Operations: Representing, comparing, and ordering whole numbers and joining and separating units
CTS Guides
 - Number Sense page 127
 - Counting page 116
 - Facts page 120
 - Comparing and Ordering Numbers page 114

- Geometry: Describing shapes and space
CTS Guides
 - Geometric Shapes page 158
 - Sorting and Classifying page 162
 - 2-D Geometry page 149

- Measurement: Ordering objects by measurable attributes
CTS Guides
 - Measurement Systems page 172
 - Measurement Tools page 173
 - Length page 171

Grade 1 Focal Points

- Number and operations and Algebra: Developing and understanding of addition and subtraction and strategies for basic addition facts and related subtraction facts
CTS Guides
 - Addition and Subtraction of Whole Numbers page 112
 - Facts page 120
 - Properties of Operations page 131
 - Number Sense page 127

- Number and operations: Developing an understanding of whole number relationships, including grouping tens and ones
CTS Guides
 - Numbers and Number Systems page 128

- Geometry: Composing and decomposing geometric shapes
CTS Guides
 - Geometric Shapes page 158
 - 2-D Geometry page 149
 - Sorting and Classifying page 162
 - Triangles page 165
 - Quadrilaterals page 161

Grade 2 Focal Points

- Number and operations: Developing an understanding of the base-ten numeration system and place-value concepts
CTS Guides
 - Numbers and Number Systems page 128
 - Place Value page 130
 - Comparing and Ordering page 114
- Number and Operations and Algebra
CTS Guides
 - Addition and Subtraction of Whole Numbers page 112
 - Properties of Operations page 131
 - Facts page 120
- Measurement: Developing an understanding of linear measurement and facility in measuring lengths
CTS Guides
 - Measurement Systems page 172
 - Measurement Tools page 173

Grade 3 Focal Points

- Number and Operations and Algebra: Developing understandings of multiplication and division and strategies for basic multiplication facts and related division facts
CTS Guides
 - Multiplication and Division of Whole Numbers page 126
 - Properties of Operations page 131
 - Facts page 120
- Number and operations: Developing an understanding of fractions and fraction equivalence
CTS Guides
 - Fractions page 121
- Geometry: Describing and analyzing properties of two-dimensional shapes
CTS Guides
 - 2-D Geometry page 129
 - Geometric Relationships page 157

Grade 4 Focal Points

- Number and Operations and Algebra: Developing quick recall of multiplication facts and related division facts and fluency with whole number multiplication
CTS Guides
 - Multiplication and Division of Whole Numbers page 126
 - Properties of Operations page 131
 - Facts page 120
- Number and Operations: Developing an understanding of decimals, including the connections between fractions and decimals
CTS Guides

- Fractions, Decimals, Percents page 122
- Numbers and Number Systems page 128
- Measurement: Developing an understanding of area and determining the areas of two-dimensional shapes
 - CTS Guides
 - Perimeter, Area, and Volume page 175
 - Measurement Tools page 173

Grade 5 Focal Points

- Numbers and Operations and Algebra: Developing an understanding of and fluency with division of whole numbers
 - CTS Guides
 - Multiplication and Division of Whole Numbers page 126
- Numbers and Operations: Developing an understanding of and fluency with addition and subtraction of fractions and decimals
 - CTS Guides
 - Fractions, Decimals, and Percents page 122
- Geometry and Measurement and Algebra: Describing three-dimensional shapes and analyzing their properties, including volume and surface area
 - CTS Guides
 - 3-D Geometry page 148
 - Geometric Relationships page 157
 - Perimeter, Area, and Volume page 175

Grade 6 Focal Points

- Number and Operations: Developing an understanding of and fluency with multiplication and division of fractions and decimals
 - CTS Guides
 - Multiplication and Division page 125
 - Fraction, Decimals, and Percents 122
- Number and Operations: Connecting ratio and rate to multiplication and division
 - CTS Guides
 - Proportionality page 198
 - Ratio and Proportion page 132
 - Rational Numbers page 133
 - Rates of Change page 144
- Algebra: Writing, interpreting, and using mathematical expressions and equations
 - CTS Guides
 - Expressions and Equations page 136
 - Variables page 146
 - Formulas page 137

Grade 7 Focal Points

- Number and Operations and Algebra and Geometry: Developing an

- understanding of and applying proportionality, including similarity
 - Proportionality page 198
 - Congruence and Similarity page 152
- Measurement and Geometry and Algebra: Developing an understanding of and using formulas to determine surface areas and volumes of three-dimensional shapes
 - Perimeter, Area and Volume page 175
- Number and Operations and Algebra: Developing an understanding of operations on all rational numbers and solving linear equations
 - Rational Numbers page 133
 - Addition and Subtraction page 111
 - Multiplication and Division page 125
 - Linear Relationships page 139

Grade 8 Focal Points

- Algebra: Analyzing and representing linear functions and solving linear equations and systems of linear equations
 - Linear Relationships page 139
- Geometry and Measurement: Analyzing two- and three-dimensional space and figures by using distance and angle
 - 2-D Geometry page 148
 - 3-D Geometry page 149
 - Transformation and Symmetry page 164
 - Triangles page 165
- Data Analysis and Number and Operations and Algebra: Analyzing and summarizing data sets
 - Measures of Center and Spread page 181
 - Summarizing Data page 187