

**Michigan Center School District  
Math Department Curriculum**

Updated October 21, 2014

Grade Level/Course 4<sup>TH</sup> Grade

**Sequence of Units**

- **Unit 1** Multiplication & Division Patterns & Relation
  - **Power Strands**
    1. 4.OA.1 Interpret a multiplication equation as a comparison
    2. 4.OA.2. Multiply or divide to solve word problems involving multiplicative comp.
    3. **4.OA.3. Solve multistep word problems using the four operations & assess reasonableness using estimation strategies**
    4. 4.OA.4 Factors/multiples & prime/composite
    5. **4.NBT.1 Recognize that a digit in one place represents ten times what it represents in the place to its right.**
    6. **4.NBT.3 Use place value understanding to round multi-digit whole numbers**
    7. **4.NBT.5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers**
    8. **4.NBT.6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors**
  - **Vocabulary/Key Concepts**
    1. algorithm
    2. area model
    3. compose/decompose
    4. composite number
    5. division
    6. equation
    7. fact families
    8. factor pair
    9. factor
    10. inverse operation
    11. multiple
    12. multiplication
    13. multiplicative comparison
    14. multiplication strategy
    15. partial products
    16. prime number
    17. product
    18. properties of multiplication (distributive, commutative, and associative)
    19. remainder
    20. unknown value
- **Unit 2** Attributes & Angles of 2-D Figures
  - **Power Strands**
    1. 4.MD.C.5. Recognize angles are formed wherever two rays share a common endpoint, and understand concepts of angle measurement

# Michigan Center School District

## Math Department Curriculum

Updated October 21, 2014

2. 4.MD.C.6. Measure angles in whole-number degrees using a protractor and sketch angles of specified measure.
  3. 4.MD.C.7. Recognize angle measure as additive. Solve addition and subtraction problems to find unknown angles
  4. **4.G.A.1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.**
  5. **4.G.A.2. Classify two-dimensional figures.** Recognize and identify right triangles.
  6. **4.G.A.3. Recognize a line of symmetry for a two-dimensional figure. Identify line-symmetric figures and draw lines of symmetry**
- **Vocabulary/Key Concepts**
    1. angle
    2. angle addition
    3. angle classification (obtuse, right, acute)
    4. angle measurement
    5. degree
    6. lines
    7. line segment
    8. line symmetry
    9. parallel lines
    10. perpendicular lines
    11. polygons
    12. ray
    13. two-dimensional
    14. triangle classification
    15. vertices
- **Unit 3 Making Sense of Decimal Fractions**
    - **Power Strands**
      1. 4.NF.5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100
      2. 4.NF.6. Use decimal notation for fractions with denominators 10 or 100
      3. 4.NF.C.7. Compare two decimals to hundredths and justify the conclusions
    - **Vocabulary/Key Concepts**
      1. compare
      2. decimal fraction
      3. decimal notation
      4. denominator
      5. equivalent
      6. fraction
      7. hundredths
      8. numerator
      9. partitioning
      10. place value

# Michigan Center School District

## Math Department Curriculum

Updated October 21, 2014

11. tenths
12. unit fraction

- **Unit 4** Using Big Numbers: Estimating & Calculating

- **Power Strands**

1. 4.NBT.1 Recognize that a digit in one place represents ten times what it represents in the place to its right.
2. 4.NBT.2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two numbers-digit whole numbers
3. 4.NBT.3 Use place value understanding to round multi-digit whole numbers
4. **4.NBT.4. Fluently add and subtract multi-digit whole numbers using the standard algorithm.**

- **Vocabulary/Key Concepts**

1. algorithm
2. base ten system
3. composing
4. decomposing
5. estimation
6. expanded notation
7. patterns
8. place value
9. problem solving
10. properties (associative and commutative)
11. rounding
12. standard form

- **Unit 5** Using Fractions

- **Power Strands**

1. **4.NF.1. Explain why a fraction  $a/b$  is equivalent to a fraction  $(n \times a)/(n \times b)$  by using visual fraction models. Use this principle to recognize and generate equivalent fractions.**
2. 4.NF.2 Compare two fractions with different numerators and different denominators, and justify the conclusions
3. **4.NF.3 Understand a fraction  $a/b$  with  $a > 1$  as a sum of fractions  $1/b$ .**
4. **4.NF.4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.**
5. 4.MD.2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money
6. 4.MD.4. Make a line plot to display a data set of measurements in fractions of a unit ( $1/2$ ,  $1/4$ ,  $1/8$ ) and solve problems involving addition and subtraction of fractions by using information presented in line plots.

- **Vocabulary/Key Concepts**

1. addition of fractions (joining)
2. benchmark fractions

# Michigan Center School District Math Department Curriculum

Updated October 21, 2014

3. compare
  4. compose/decompose
  5. denominator
  6. equipartitioning
  7. equivalency
  8. estimation
  9. improper fraction
  10. like/common denominator
  11. mixed numbers
  12. multiplication of fractions
  13. numerator
  14. proper fraction
  15. subtraction of fractions (separating or comparison)
  16. unit fractions
- **Unit 6** Using Perimeter & Area
    - **Power Strands**
      1. 4.MD.3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems
    - **Vocabulary/Key Concepts**
      1. area
      2. area measurement
      3. equation
      4. formula
      5. linear measurement
      6. perimeter
      7. unknown
  - **Unit 7** Units of Measure & Equivalence
    - **Power Strands**
      1. 4.OA.5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.
      2. 4.MD.A.1. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit.
      3. 4.MD.2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money
    - **Vocabulary/Key Concepts**
      1. conversion
      2. customary
      3. decompose
      4. distance
      5. equivalent

**Michigan Center School District  
Math Department Curriculum**

Updated October 21, 2014

6. liquid volume
7. mass
8. metric
9. patterns
10. regrouping
11. relative sizes of measurement
12. units of length, volume, mass, and time

*Kathy L. Brown*

---

Signature of Current Grade Level/Course Representative

*Cynthia Salas*

---

Signature of Prior Grade Level/Course Representative

*Angela Menney*

---

Signature of Next Grade Level/Course Representative