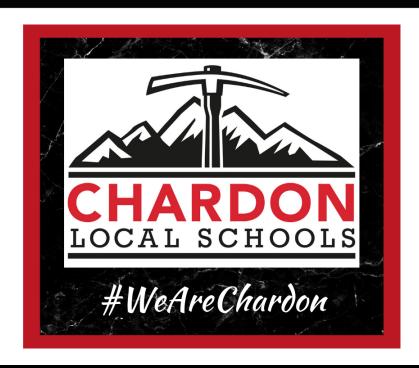
The mission of the Chardon Local Schools is high achievement for all students where learning is our most important work.

# **Course of Study — MATH**

**Revised November 2021** 

## **5TH GRADE**





### 5th Grade

## Strand: Operations and Algebraic Thinking

## **Learning Standard:**

#### 5.OA.1

Use parentheses in numerical expressions, and evaluate expressions with this symbol. Formal use of algebraic order of operations is not necessary.

## **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, discussions, homework/classwork, observations)
- Summative Assessments (using rubrics; tests/exams)

## How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Operations and Algebraic Thinking

### **Learning Standard:**

#### 5.OA.2

Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as  $2 \times (8 + 7)$ . Recognize that  $3 \times (18,932 + 921)$  is three times as large as 18,932 + 921, without having to calculate the indicated sum or product.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### **How Re-Taught?**

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Operations and Algebraic Thinking

### **Learning Standard:**

#### 5.OA.3

Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: NUMBER AND OPERATIONS IN BASE TEN

### **Learning Standard:**

#### 5.NBT.1

Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.

## **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: NUMBER AND OPERATIONS IN BASE TEN

#### **Learning Standard:**

#### 5.NBT.2

Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole number exponents to denote powers of 10.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
  - Cooperative Groups
  - Stations
  - Data Driven Instruction
  - Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### **How Assessed?**

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: NUMBER AND OPERATIONS IN BASE TEN

### **Learning Standard:**

#### 5.NBT.3

Read, write, and compare decimals to thousandths. a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded formG, e.g.,  $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ . b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### **How Assessed?**

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

## How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: NUMBER AND OPERATIONS IN BASE TEN

## **Learning Standard:**

#### 5.NBT.4

Use place value understanding to round decimals to any place, millions through hundredths

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: NUMBER AND OPERATIONS IN BASE TEN

### **Learning Standard:**

#### 5.NBT.5

Fluently multiply multi-digit whole numbers using a standard algorithm.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: NUMBER AND OPERATIONS IN BASE TEN

### **Learning Standard:**

#### 5.NBT.6

Find whole number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### **How Assessed?**

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: NUMBER AND OPERATIONS IN BASE TEN

### **Learning Standard:**

#### 5.NBT.7

Solve real-world problems by adding, subtracting, multiplying, and dividing decimals using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction, or multiplication and division; relate the strategy to a written method and explain the reasoning used.

- a. Add and subtract decimals, including decimals with whole numbers, (whole numbers through the hundreds place and decimals through the hundredths place).
- b. Multiply whole numbers by decimals (whole numbers through the hundreds place and decimals through the hundredths place).
- c. Divide whole numbers by decimals and decimals by whole numbers (whole numbers through the tens place and decimals less than one through the hundredths place using numbers whose division can be readily modeled). For example, 0.75 divided by 5, 18 divided by 0.6, or 0.9 divided by 3.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### **How Assessed?**

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Number and Fractions-Operations

### **Learning Standard:**

#### 5.NF.1

Add and subtract fractions with unlike denominators (including mixed numbers and fractions greater than 1) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, use visual models and properties of operations to show 2/3 + 5/4 = 8/12 + 15/12 = 23/12. In general,  $a/b + c/d = (a/b \times d/d) + (c/d \times b/b) = (ad + bc)/bd$ .

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### **How Assessed?**

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Number and Fractions-Operations

### **Learning Standard:**

#### 5.NF.2

Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction modelsG or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### **How Assessed?**

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Number and Fractions-Operations

### **Learning Standard:**

#### 5.NF.3

Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50 pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

## How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Number and Fractions-Operations

### **Learning Standard:**

#### 5.NF.4

Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. a. Interpret the product  $(a/b) \times q$  as a parts of a partition of q into b equal parts, equivalently, as the result of a sequence of operations  $a \times q \div b$ .

For example, use a visual fraction model to show  $(2/3) \times 4 = 8/3$ , and create a story context for this equation. Do the same with  $(2/3) \times (4/5) = 8/15$ . (In general,  $(a/b) \times (c/d) = ac/bd$ .) b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Number and Fractions-Operations

### **Learning Standard:**

#### 5.NF.5

Interpret multiplication as scaling (resizing). a. Compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. b. Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence  $a/b = (n \times a) / (n \times b)$  to the effect of multiplying a/b by 1.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### **How Assessed?**

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### **How Re-Taught?**

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Number and Fractions-Operations

### **Learning Standard:**

#### 5.NF.6

Solve real-world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Number and Fractions-Operations

### **Learning Standards:**

#### 5.NF.7

Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. In general, students able to multiply fractions can develop strategies to divide fractions, by reasoning about the relationship between multiplication and division, but division of a fraction by a fraction is not a requirement at this grade.

- a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for  $(1/3) \div 4$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $(1/3) \div 4 = (1/12)$  because  $(1/12) \times 4 = (1/3)$ .
- b. Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for  $4 \div (1/5)$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $4 \div (1/5) = 20$  because  $20 \times (1/5) = 4$ .
- c. Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share 1/2 pound of chocolate equally? How many 1/3 cup servings are in 2 cups of raisins?

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### **How Assessed?**

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Measurement and Data

## **Learning Standard:**

#### 5.MD.1

Know relative sizes of these U.S. customary measurement units: pounds, ounces, miles, yards, feet, inches, gallons, quarts, pints, cups, fluid ounces, hours, minutes, and seconds. Convert between pounds and ounces; miles and feet; yards, feet, and inches; gallons, quarts, pints, cups, and fluid ounces; hours, minutes, and seconds in solving multi-step, real-world problems.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### **How Assessed?**

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### **How Re-Taught?**

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Measurement and Data

## **Learning Standard:**

#### 5.MD.2

Display and interpret data in graphs (picture graphs, bar graphs, and line plotsG) to solve problems using numbers and operations for this grade, e.g., including U.S. customary units in fractions 1/2, 1/4, 1/8, or decimals

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

## How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- data-driven interventions
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Measurement and Data

### **Learning Standard:**

#### 5.MD.3

Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.

**How Taught?** 

## Teaching activities may include, but are not limited

- **Direct Instruction**
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- **Board Adopted Materials**

### **How Assessed?**

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different
- Universal Design for Learning principles offering students opportunities to experience and engage material in new and different way
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Measurement and Data

## **Learning Standard:**

#### 5.MD.4

Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.

## **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### **How Assessed?**

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- Universal Design for Learning principles offering students opportunities to experience and engage material in new and different way
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Measurement and Data

### **Learning Standard:**

#### 5.MD.5

Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume.

- a. Find the volume of a right rectangular prism with whole number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole number products as volumes, e.g., to represent the Associative Property of Multiplication.
- b. Apply the formulas  $V = \ell \times w \times h$  and  $V = B \times h$  for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real-world and mathematical problems.
- c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems.

## Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations

**How Taught?** 

- Data Driven Instruction
- Scaffolding

#### How Assessed?

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (formal essays, using rubrics; tests/exams, projects, creative assignments, presentations)

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- Universal Design for Learning principles offering students opportunities to experience and engage material in new and different way
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Geometry

### **Learning Standard:**

#### 5.G.1

Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond, e.g., x-axis and x-coordinate, y-axis and y-coordinate.

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (formal essays, using rubrics; tests/exams, projects, creative assignments, presentations)

#### **How Re-Taught?**

- breaking down concept into smaller components
- presenting the information again in a different way
- Universal Design for Learning principles offering students opportunities to experience and engage material in new and different way
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Geometry

## Learning Standard:

#### 5.G.2

Represent real-world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

## **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (formal essays, using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- Universal Design for Learning principles offering students opportunities to experience and engage material in new and different way
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



## 5th Grade

## Strand: Geometry

## Learning Standard:

#### 5.G.3

Identify and describe commonalities and differences between types of triangles based on angle measures (equiangular, right, acute, and obtuse triangles) and side lengths (isosceles, equilateral, and scalene triangles).

### **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (formal essays, using rubrics; tests/exams, projects, creative assignments, presentations)

#### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- Universal Design for Learning principles offering students opportunities to experience and engage material in new and different way
- practice activities such as computer tutorials, games, hands-on activities
- review sessions



### 5th Grade

## Strand: Geometry

## Learning Standard:

#### 5.G.4

Identify and describe commonalities and differences between types of quadrilaterals based on angle measures, side lengths, and the presence or absence of parallel and perpendicular lines, e.g., squares, rectangles, parallelograms, trapezoidsG, and rhombuses.

## **How Taught?**

# Teaching activities may include, but are not limited to:

- Direct Instruction
- Cooperative Groups
- Stations
- Data Driven Instruction
- Scaffolding

#### Materials:

- Workbooks
- Board Adopted Materials

#### How Assessed?

#### Assessments may include, but are not limited to:

- Pre-Assessments (pre-tests, observation, anticipation guide, questioning, diagnostics)
- Formative Assessments (entry/exit slips, group work, reflections, discussions,, homework/classwork, self and peer evaluations, observations, conferences, rubrics)
- Summative Assessments (formal essays, using rubrics; tests/exams, projects, creative assignments, presentations)

### How Re-Taught?

- breaking down concept into smaller components
- presenting the information again in a different way
- Universal Design for Learning principles offering students opportunities to experience and engage material in new and different way
- practice activities such as computer tutorials, games, hands-on activities
- review sessions