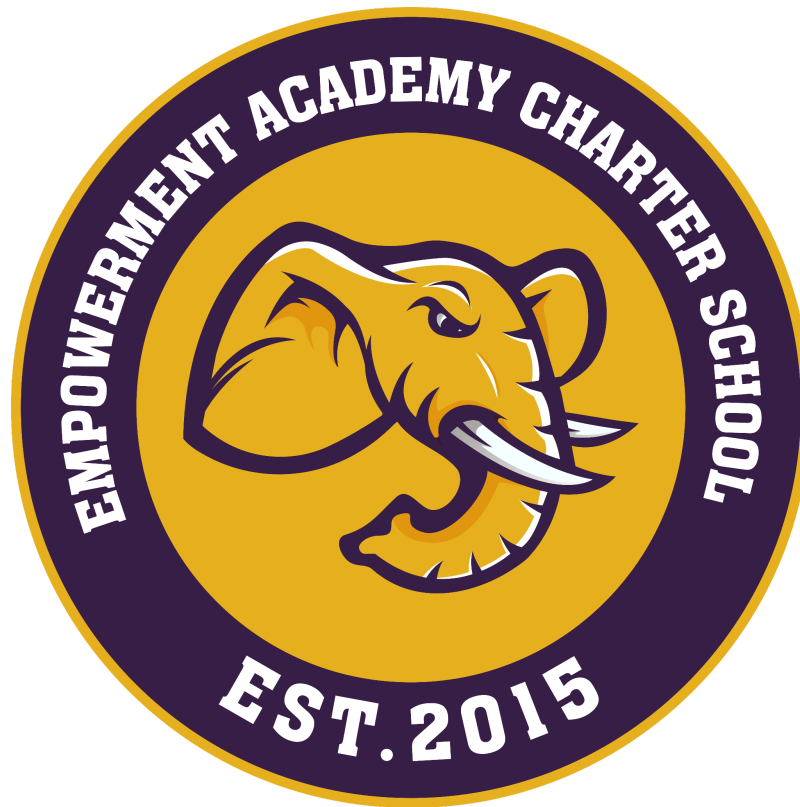# Empowerment Academy Charter School

Elementary Mathematics Curriculum

# Kindergarten Mathematics

**COURSE DESCRIPTION**

The mathematics curriculum at Empowerment Academy Charter School is designed to prepare all students for their future in the 21st century and offer skills and strategies to be a successful member of their community.  In Kindergarten, students are introduced to the fundamental mathematical concepts and skills aligned to the [New Jersey Student Learning Standards and the Standards for Mathematical Practices](#).  The students engage with numbers by writing written numerals to represent quantities and solve quantitative problems (i.e. counting items in a set, modeling joining and separating situations with sets of objects, and writing equations).  Students also will describe their physical world using geometric vocabulary (i.e. shapes, orientation, spatial relationships, etc.).  They can identify, name, and describe 2D shapes (squares, triangles, circles, rectangles, and hexagons) in a variety of arrangements and can name and describe 3D shapes (cubes, cones, cylinders, and spheres).  Students use shapes to model objects in their environment and construct more complex shapes.  New for the 2024-2025 school year, students in Kindergarten will also begin work with money.  Students will understand that certain objects are coins and dollar bills, and identify the values of all U.S. coins and the one-dollar bill.

**COURSE RESOURCES**

- Into Math, K-8 Teacher Edition & Resources (Houghton Mifflin Harcourt)
- Into Math, K-8 Student Edition Workbooks (Houghton Mifflin Harcourt)
- Scope & Sequence Guide
- Manipulatives
- [Virtual Manipulatives](#) (Pearson)
- *Children's Mathematics* (CGI), Heinemann
- Illustrative Mathematics Tasks
- The Writing Revolution (Jossey-Bass)
- MAP Growth, NWEA

**ASSESSMENTS**

| Benchmark Assessments | Formative Assessments | Summative Assessments | Alternative Assessments |
|---|---|---|---|
| • MAP Growth Test (3 per school year) | • Class Participation<br>• Class Discussions<br>• Classwork Assignments | • Quizzes<br>• Unit Tests<br>• Interim Assessments | • Choice Boards<br>• Projects |

**INTEGRATED ACCOMMODATIONS & MODIFICATIONS**

| Special Education Students | English Language Learners | At Risk Students | 504 Students | Gifted & Talented Students |
|---|---|---|---|---|
| <ul><li>Preferential Seating</li><li>Provide adjusted time/length of assignments</li><li>Provide study guides for assessments</li><li>Provide graphic organizers</li><li>Frequent checks for understanding</li><li>Use of a calculator (if appropriate)</li><li>Use of manipulatives</li></ul> | <ul><li>Link concepts to students' background and experiences</li><li>Use speech appropriate for students' proficiency level</li><li>Provide translated materials and/or audio versions of text (when appropriate)</li></ul> | <ul><li>Preferential seating</li><li>Accept late work without penalty</li><li>Task list for routines/procedures on desk</li><li>Provide graphic organizers</li><li>Provide access to accurate notes</li></ul> | <ul><li>Incorporate student choice</li><li>Provide graphic organizers</li><li>Provide adjusted time/length of assignments</li></ul> | <ul><li>Incorporate student choice</li><li>Incorporate independent studies/projects</li></ul> |

**STANDARDS COVERED BY UNIT**

| | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 |
|---|---|---|---|---|---|
| **Counting & Cardinality (K.CC)** | | | | | |
| **A. Know number names and the count sequence** | | | | | |
| 1. Count to 100 by ones and by tens | | ★ | | | |
| 2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1). | | ★ | | | |
| 3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). | ★ | | | | |
| **B. Count to tell the number of objects.** | | | | | |
| 4. Understand the relationship between numbers and quantities; connect counting to cardinality | | | | | |
| a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. | ★ | | | | |
| b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. | ★ | | | ★ | |
| c. Understand that each successive number name refers to a quantity that is one larger. | ★ | ★ | | | |
| 5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. | ★ | | | ★ | |
| **C. Compare numbers.** | | | | | |
| 6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Include groups with up to ten objects.) | ★ | ★ | | | |
| 7. Compare two numbers between 1 and 10 presented as written numerals. | ★ | | | | |
| **Operations & Algebraic Thinking (K.OA)** | | | | | |
| **A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from** | | | | | |
| 1. Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. | | ★ | | | |
| 2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. | | ★ | | | |
| 3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). | | ★ | | | |
| 4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. | | ★ | | | |

| Standard | | | | | |
|---|---|---|---|---|---|
| 5. Demonstrate fluency for addition and subtraction within 5. | ★ | | | | |
| **Number & Operations in Base Ten (K.NBT)** | | | | | |
| **A. Work with numbers 11–19 to gain foundations for place value.** | | | | | |
| 1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. | | | | ★ | |
| **Measurement (K.M)** | | | | | |
| **A. Describe and compare measurable attributes.** | | | | | |
| 1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. | | | | | ★ |
| 2. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. (For example, directly compare the heights of two children and describe one child as taller/shorter.) | | | | | ★ |
| **B. Work with money** | | | | | |
| 3. Understand that certain objects are coins and dollar bills, and that coins and dollar bills represent money. Identify the values of all U.S. coins and the one-dollar bill. | | ★ | | | |
| **Data Literacy (K.DL)** | | | | | |
| **A. Classify objects and count the number of objects in each category** | | | | | |
| 1. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10) | ★ | | | | |
| **Geometry (K.G)** | | | | | |
| **B. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).** | | | | | |
| 1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to | | | ★ | | |
| 2. Correctly name shapes regardless of their orientations or overall size. | | | ★ | | |
| 3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). | | | ★ | | |
| **C. Analyze, compare, create, and compose shapes.** | | | | | |
| 4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). | | | ★ | | |
| 5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. | | | ★ | | |

*updated 2024-2025*

*subject to change*

| | Col 1 | Col 2 | Col 3 | Col 4 | Col 5 |
|---|---|---|---|---|---|
| 6. Compose simple shapes to form larger shapes. (For example, "Can you join these two triangles with full sides touching to make a rectangle?".) | | | ★ | | |
| **Mathematical Practices (MP)** | | | | | |
| 1. Make sense of problems and persevere in solving them | ★ | ★ | ★ | ★ | ★ |
| 2. Reason abstractly and quantitatively | ★ | ★ | ★ | ★ | ★ |
| 3. Construct viable arguments and critique the reasoning of others. | | | | | ★ |
| 4. Model with Mathematics | ★ | ★ | ★ | | |
| 5. Use appropriate tools strategically | ★ | ★ | ★ | ★ | ★ |
| 6. Attend to precision | ★ | ★ | ★ | ★ | ★ |
| 7. Look for and make use of structure. | ★ | ★ | ★ | ★ | |
| 8. Look for and express regularity in repeated reasoning. | ★ | ★ | | | |

## OVERVIEW BY UNIT

| **Unit 1:** Count Sequence and Numbers to 5 |
|---|
| **Timeframe:** *September - October, November - December* |

| Unit Overview | During this unit, students learn to count objects, saying the number names in each order. They pair each object with only one number name, and each number name with only one object. Students begin to understand that the last number said tells the number of objects counted. Additionally, they begin to count to answer "how many?" questions. |
|---|---|
| Essential Questions | 1. How do you represent numbers to five with objects?<br>2. How do you represent numbers to 5 with a written numeral?<br>3. How can you compare objects in one group with objects in another group within 5?<br>4. How do you classify and sort objects into different categories?<br>5. How can you add and take away from numbers 0 to 5?<br>6. How can you solve word problems involving putting together and taking part from five?<br>7. How do you represent numbers 6 to 10 with objects?<br>8. How do you represent numbers 6 to 10 with a written numeral? |

| **Unit 3: Geometry** |
|---|
| **Timeframe:** *October - November* |

| | |
|---|---|
| **Unit Overview** | During this unit, students will analyze and compare 2D and 3D shapes.  Students will describe and compare these shapes and will also describe the position of objects. |
| **Essential Questions** | 1. How do you name, describe, and compare two-dimensional shapes?<br>2. How do you name, describe, and compare 3-D shapes?<br>3. How do you describe the position of an object? |

**Unit 2: Count Sequence & Numbers to 10**
*Timeframe: January - March*

| | |
|---|---|
| **Unit Overview** | During this unit, students will represent numbers 6-10 with objects and written numerals.  Students compare numbers to 10 and learn to put together and take apart amounts within 10 (foundation for addition and subtraction).  Students use their understanding of the count sequence to count to 100. |
| **Essential Questions** | 1. How do you count in order to 100?<br>2. How do you compare the number of objects within 10? How do you match equal groups within 10?<br>3. How can you add to a group to find the total? How can you take from a group to find the amount left?<br>4. How can you put together objects/numbers to find a total? How can you take away from a group to find how many are left?<br>5. How can you make numbers 6-10? How can you make 10 from a given number? |

**Unit 4: Numbers & Operations in Base Ten**
*Timeframe: April*

| | |
|---|---|
| **Unit Overview** | During this unit, students will represent numbers up to 10 in different forms by decomposing into tens and ones.  Students will count and write numbers to 20. |
| **Essential Questions** | 1. How can you present numbers to 19 by decomposing them into tens and ones?<br>2. How can you count and write numbers to 20? |

**Unit 5: Measurement**
*Timeframe: May - June*

| | |
|---|---|
| **Unit Overview** | During this unit, students will learn about comparing and measuring.   Students will learn how to compare  and describe length and height and compare the weight of two objects. |

| **Essential Questions** | 3. How do you describe length and height? How do you compare lengths and heights? |
|---|---|
| | 4. How do you describe weight? How do you compare the weights of two objects? |

# 1st Grade Mathematics

**COURSE DESCRIPTION**

The mathematics curriculum at Empowerment Academy Charter School is designed to prepare all students for their future in the 21st century and offer skills and strategies to be a successful member of their community. In 1st Grade, students are introduced to the fundamental mathematical concepts and skills aligned to the New Jersey Student Learning Standards and the Standards for Mathematical Practices. By the end of 1st grade, students understand addition as putting together and subtraction as taking apart, can solve addition and subtraction word problems within 20 and can relate counting to addition and subtraction using strategies such as counting on and counting back. Students understand the place value system for two-digit numbers and can add within 100. Students work with measurement through time (in hours and half hours) and on digital and analog clocks. Students represent and interpret data in graphs. Students identify and describe shapes and begin to build the foundations of fraction understanding by partitioning circles and rectangles into equal parts (halves, thirds, and fourths). New for the 2024-2025 school year, students in 1st Grade will know the comparative values of coins and all dollar bills, and use dollars in solutions of problems up to $20.

**COURSE RESOURCES**
- Into Math, K-8 Teacher Edition & Resources (Houghton Mifflin Harcourt)
- Into Math, K-8 Student Edition Workbooks (Houghton Mifflin Harcourt)
- Scope & Sequence Guide
- Manipulatives
- Virtual Manipulatives (Pearson)
- *Children's Mathematics* (CGI), Heinemann
- Illustrative Mathematics Tasks
- The Writing Revolution (Jossey-Bass)
- MAP Growth, NWEA

**ASSESSMENTS**

| Benchmark Assessments | Formative Assessments | Summative Assessments | Alternative Assessments |
|---|---|---|---|
| ● MAP Growth Test (3 per school year) | ● Class Participation<br>● Class Discussions<br>● Classwork Assignments | ● Quizzes<br>● Unit Tests<br>● Interim Assessments | ● Choice Boards<br>● Projects |

**INTEGRATED ACCOMMODATIONS & MODIFICATIONS**

| Special Education Students | English Language Learners | At Risk Students | 504 Students | Gifted & Talented Students |
|---|---|---|---|---|
| <ul><li>Preferential Seating</li><li>Provide adjusted time/length of assignments</li><li>Provide study guides for assessments</li><li>Provide graphic organizers</li><li>Frequent checks for understanding</li><li>Use of a calculator (if appropriate)</li><li>Use of manipulatives</li></ul> | <ul><li>Link concepts to students' background and experiences</li><li>Use speech appropriate for students' proficiency level</li><li>Provide translated materials and/or audio versions of text (when appropriate)</li></ul> | <ul><li>Preferential seating</li><li>Accept late work without penalty</li><li>Task list for routines/procedures on desk</li><li>Provide graphic organizers</li><li>Provide access to accurate notes</li></ul> | <ul><li>Incorporate student choice</li><li>Provide graphic organizers</li><li>Provide adjusted time/length of assignments</li></ul> | <ul><li>Incorporate student choice</li><li>Incorporate independent studies/projects</li></ul> |

**STANDARDS COVERED BY UNIT**

| | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 |
|---|---|---|---|---|---|---|
| **Operations & Algebraic Thinking (1.OA)** | | | | | | |
| **A.   Represent and solve problems involving addition and subtraction.** | | | | | | |
| 1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. | ★ | ★ | | | | |
| 2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. | ★ | | | | | |
| **B.   Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.** | | | | | | |
| 3. Apply properties of operations as strategies to add and subtract.3 Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.) | ★ | | | | | |
| 4. Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. | ★ | | | | | |
| **C.   Add and subtract within 20.** | | | | | | |
| 5.  Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). | ★ | | | | | |
| 6. Add and subtract within 20, demonstrating accuracy and efficiency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g. 8 + 6 = 8 + 2 = 10 + 4 = 14); decomposing a number leading to a ten (e.g. 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that, 8 + 4 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7  by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). | ★ | | | ★ | | |
| **D.   Work with addition and subtraction equations.** | | | | | | |
| 7.  Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2. | ★ | | ★ | | | |
| 8. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 =☐ -3, 6 + 6☐ | ★ | | | | | |
| **Number and Operations in Base Ten (1.NBT)** | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **A.** | **Extend the counting sequence.** | | | | | |
| | 1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. | | | ★ | | | |
| **C.** | **Understand place value.** | | | | | |
| | 2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: | | | ★ | | | |
| |    a.  10 can be thought of as a bundle of ten ones — called a "ten." | | | ★ | | | |
| |    b.  The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. | | | ★ | | | |
| |    c.  The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). | | | ★ | | | |
| | 3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. | | | ★ | | | |
| **D.** | **Use place value understanding and properties of operations to add and subtract.** | | | | | |
| | 4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g., base ten blocks) or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. | | | | ★ | | |
| | 5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. | | | | ★ | | |
| | 6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. | | | | ★ | | |
| **Measurement & Data (1.M)** | | | | | | | |
| **A.** | **Measure lengths indirectly and by iterating length units.** | | | | | |
| | 1. Order three objects by length; compare the lengths of two objects indirectly by using a third object. | | | | | | ★ |
| | 2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps. | | | | | | ★ |
| **B.** | **Tell and write time.** | | | | | |
| | 3. Tell and write time in hours and half-hours using analog and digital clocks. | | | | | | ★ |

| | Col1 | Col2 | Col3 | Col4 | Col5 | Col6 |
|---|---|---|---|---|---|---|
| **C.  Work with money.** | | | | | | |
| 4. Know the comparative values of coins and all dollar bills (e.g., a dime is of greater value than a nickel). Use appropriate notation (e.g., 69¢, $10). | | | | ★ | | |
| 5.  Use dollars in the solutions of problems up to $20. Find equivalent monetary values (e.g., a nickel is equivalent in value to five pennies). Show monetary values in multiple ways. (For example, show 25¢ as two dimes and one nickel, and as five nickels. Show $20 as two tens and as 20 ones.) | | | | ★ | | |
| **Data Literacy (1.DL)** | | | | | | |
| **A.   Represent and Interpret data** | | | | | | |
| 1. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another | | ★ | | | | |
| **Geometry (1.G)** | | | | | | |
| **A.   Reason with shapes and their attributes.** | | | | | | |
| 1.  Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. | | | | | ★ | |
| 2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. | | | | | ★ | |
| 3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares. | | | | | ★ | |
| **Mathematical Practices (MP)** | | | | | | |
| 1. Make sense of problems and persevere in solving them | ★ | ★ | ★ | | ★ | ★ |
| 2.  Reason abstractly and quantitatively | ★ | ★ | ★ | ★ | | ★ |
| 3.  Construct viable arguments and critique the reasoning of others. | ★ | ★ | ★ | ★ | ★ | ★ |
| 4.  Model with Mathematics | ★ | ★ | ★ | ★ | | |
| 5.  Use appropriate tools strategically | ★ | ★ | ★ | ★ | ★ | ★ |
| 6.  Attend to precision | ★ | ★ | ★ | ★ | ★ | ★ |
| 7.  Look for and make use of structure. | ★ | ★ | ★ | ★ | ★ | ★ |
| 8.  Look for and express regularity in repeated reasoning. | ★ | ★ | ★ | ★ | ★ | ★ |

**OVERVIEW BY UNIT**

| | |
|---|---|
| **Unit 1: Ways to Add and Subtract**<br>*Timeframe:* *September - November* | |
| **Unit Overview** | During this unit, students extend their understanding of addition and subtraction to numbers within 20 and understand the relationship between addition and subtraction to solve problems. |
| **Essential Questions** | 1. How do you add numbers 0-20?<br>2. How do you subtract numbers 0-20?<br>3. How do the properties of addition help making adding easier?<br>4. How do addition and subtraction relate? |
| **Unit 2: Count Sequence and Numbers to 10**<br>*Timeframe:* *November - January* | |
| **Unit Overview** | During this unit, students solve add to and take from as well as put together and take apart problems. Students will compare numbers. Students will show information on different types of graphs. |
| **Essential Questions** | 1. How do you solve add to and take from problems?<br>2. How do you solve put together and take apart problems?<br>3. How do you compare numbers?<br>4. How can you show and interpret information on different types of graphs? |
| **Unit 3: Numbers to 120**<br>*Timeframe:* *January - February* | |
| **Unit Overview** | During this unit, students will show numbers using objects and drawings, show numbers using tens and ones to 120 and use symbols to compare numbers. |
| **Essential Questions** | 1. How can you show numbers 11-19 as tens and ones using objects and drawings?<br>2. How can you show numbers using tens and ones to 120?<br>3. How can you use symbols to compare numbers? |
| **Unit 4: Addition and Subtraction in Base Ten** | |

| | |
|---|---|
| **Timeframe:** *March- April* | |
| **Unit Overview** | During |
| **Essential Questions** | 1. How can you add and subtract two digit numbers?<br>2. How can you add and subtraction two digit numbers? |
| **Unit 5: Geometry**<br>**Timeframe:** *April - May* | |
| **Unit Overview** | During this unit, students will begin to explore 2D and 3D shapes.  They will be able to describe, draw, and create these shapes as well as find these shapes in the real world.  They will begin fraction foundations by partitioning shapes into equal parts. |
| **Essential Questions** | 1. How can you describe, draw, and create two dimensional shapes?<br>2. How can you describe, draw, and create three dimensional shapes?<br>3. How can you partition shapes into equal parts? |
| **Unit 6: Measurement**<br>**Timeframe:** *May - June* | |
| **Unit Overview** | During this unit, students will measure length using nonstandard units.  Students will also understand and tell time to the hour and half hour. |
| **Essential Questions** | 1. How can you measure length?<br>2. How can you tell time to the nearest half hour? |

# 2nd Grade Mathematics

**COURSE DESCRIPTION**

The mathematics curriculum at Empowerment Academy Charter School is designed to prepare all students for their future in the 21st century and offer skills and strategies to be a successful member of their community.  In 1st Grade, students are introduced to the fundamental mathematical concepts and skills aligned to the New Jersey Student Learning Standards and the Standards for Mathematical Practices.  By the end of 2nd Grade, students should develop fluency with addition and subtraction within 100.  They can count by fives, tens, and multiples of hundreds, tens, and ones.  Students understand multi-digit numbers (up to 1000) written in base-ten notation and can recognize that the digits in each place represent thousands, hundreds, tens, or ones.  Students can use efficient and accurate methods to compute sums and differences of whole numbers.  Students recognize standard units of measure (centimeters and inches) and use rulers to measure.  Students also describe and analyze 2D and 3D shapes.  They are working on developing a foundation for area, volume, congruence and similarity.  New for the 2024-2025 school year, students in Second Grade understand that people collect data to answer questions, and that data can vary.  They identify what could count as data and use data to solve problems.

**COURSE RESOURCES**
- Into Math, K-8 Teacher Edition & Resources (Houghton Mifflin Harcourt)
- Into Math, K-8 Student Edition Workbooks (Houghton Mifflin Harcourt)
- Scope & Sequence Guide
- Manipulatives
- Virtual Manipulatives (Pearson)
- *Children's Mathematics* (CGI), Heinemann
- Illustrative Mathematics Tasks
- The Writing Revolution (Jossey-Bass)
- MAP Growth, NWEA

**ASSESSMENTS**

| Benchmark Assessments | Formative Assessments | Summative Assessments | Alternative Assessments |
|---|---|---|---|
| • MAP Growth Test (3 per school year) | • Class Participation<br>• Class Discussions<br>• Classwork Assignments | • Quizzes<br>• Unit Tests<br>• Interim Assessments | • Choice Boards<br>• Projects |

**INTEGRATED ACCOMMODATIONS & MODIFICATIONS**

| Special Education Students | English Language Learners | At Risk Students | 504 Students | Gifted & Talented Students |
|---|---|---|---|---|
| • Preferential Seating<br>• Provide adjusted time/length of assignments<br>• Provide study guides for assessments<br>• Provide graphic organizers<br>• Frequent checks for understanding<br>• Use of a calculator (if appropriate)<br>• Use of manipulatives | • Link concepts to students' background and experiences<br>• Use speech appropriate for students' proficiency level<br>• Provide translated materials and/or audio versions of text (when appropriate) | • Preferential seating<br>• Accept late work without penalty<br>• Task list for routines/procedures on desk<br>• Provide graphic organizers<br>• Provide access to accurate notes | • Incorporate student choice<br>• Provide graphic organizers<br>• Provide adjusted time/length of assignments | • Incorporate student choice<br>• Incorporate independent studies/projects |

**STANDARDS COVERED BY UNIT**

| | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 | Unit 7 |
|---|---|---|---|---|---|---|---|
| **Operations & Algebraic Thinking (2.OA)** | | | | | | | |
| **A. Represent and solve problems involving addition and subtraction.** | | | | | | | |
| 1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem | | | | ★ | | | |
| **B. Add and subtract within 20.** | | | | | | | |
| 2. Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers. | ★ | | | | | | |
| **C. Work with equal groups of objects to gain foundations for multiplication.** | | | | | | | |
| 3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends. | ★ | | | | | | |
| 4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. | ★ | | | | | | |
| **Number and Operations in Base Ten (2.NBT)** | | | | | | | |
| **A. Understand place value.** | | | | | | | |
| 1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: | | ★ | | | | | |
| a. 100 can be thought of as a bundle of ten tens — called a "hundred." | | ★ | | | | | |
| b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). | | ★ | | | | | |
| 2. Count within 1000; skip-count by 5s, 10s, and 100s. | | ★ | | | | | |
| 3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. | | ★ | | | | | |
| 4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. | | ★ | | | | | |
| **B. Use place value understanding and properties of operations to add and subtract.** | | | | | | | |
| 5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. | | | | ★ | | | |
| 6. Add up to four two-digit numbers using strategies based on place value and properties of | | | | ★ | | | |

| Standard | | | | | | | |
|---|---|---|---|---|---|---|---|
| operations. | | | | | | | |
| 7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. | | | | ★ | ★ | | |
| 8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. | | ★ | | | | | |
| 9. Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations should be supported by drawings or objects). | | | | ★ | ★ | | |

**Measurement (2.M)**

**A. Measure and estimate lengths in standard units.**

| Standard | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. | | | | | | ★ | |
| 2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen | | | | | | ★ | |
| 3. Estimate lengths using units of inches, feet, centimeters, and meters | | | | | | ★ | |
| 4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. | | | | | | ★ | |

**B. Relate addition and subtraction to length**

| Standard | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. | | | | | | ★ | |
| 6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram. | | | | | | ★ | |

**C. Work with time and money**

| Standard | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. | | | ★ | | | | |
| 8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. (Example: If you have 2 dimes and 3 pennies, how many cents do you have?) | | | ★ | | | | |

**Data Literacy (2.DL)**

**A. Understand concepts of data.**

| Standard | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Understand that people collect data to answer questions. Understand that data can vary. | ★ | | | | | | |

| | | | | | | | |
|---|:-:|:-:|:-:|:-:|:-:|:-:|:-:|
| 2. Identify what could count as data (e.g., visuals, sounds, numbers). | ★ | | | | | | |
| **B.   Represent and interpret data.** | | | | | | | |
| 3. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. | | | | | | ★ | |
| 4. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems4 using information presented in a bar graph. | ★ | | | | | | |
| **Geometry (2.G)** | | | | | | | |
| **C.   Reason with shapes and their attributes.** | | | | | | | |
| 1.  Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.  (Sizes are compared directly or visually, not compared by measuring) | | | | | | | ★ |
| 2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. | | | | | | ★ | |
| 3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.  (For example, students partition a rectangle (i.e. the whole) into three equal shares, identify each of the shares as a 'third' and describe the rectangle as three 'thirds'.) | | | | | | ★ | |
| **Mathematical Practices (MP)** | | | | | | | |
| 1. Make sense of problems and persevere in solving them | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| 2.  Reason abstractly and quantitatively | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| 3.  Construct viable arguments and critique the reasoning of others. | ★ | ★ | ★ | | ★ | ★ | ★ |
| 4.  Model with Mathematics | ★ | | | ★ | | ★ | |
| 5.  Use appropriate tools strategically | ★ | ★ | ★ | ★ | ★ | ★ | |
| 6.  Attend to precision | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| 7.  Look for and make use of structure. | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| 8.  Look for and express regularity in repeated reasoning. | ★ | ★ | ★ | ★ | ★ | ★ | ★ |

**OVERVIEW BY UNIT**

| | |
|---|---|
| **Unit 1:  Numbers to 20 and Data**<br>***Timeframe:*** *September - October* | |
| **Unit Overview** | During this unit, students fluently add and subtract within 20.  They use various strategies such as counting on, counting back, using a number line, etc.  They begin to build a foundation for multiplication/division by arranging items into equal groups and arrays.  Students work with numbers within 20 to collect and interpret data. |
| **Essential Questions** | 1. How can you fluently add and subtract within 20 using various strategies?<br>2. How can you show numbers by arranging them in equal groups?<br>3. How can you collect, display, and interpret data? |
| **Unit 2: Place Value**<br>***Timeframe:*** *October - November* | |
| **Unit Overview** | During this unit, students will learn to represent numbers to 1,000 using hundreds, tens, and ones and can write these numbers in different forms.  They will continue to build the foundations of division. |
| **Essential Questions** | 1. How can you represent numbers to 1000 using hundreds, tens, and ones?<br>2. How can you write numbers to 1,000 in different forms?<br>3. How can you represent division? |
| **Unit 3: Time and Money**<br>***Timeframe:*** *November - December* | |
| **Unit Overview** | During this unit, students use their understanding of place value to use coins to show amounts of money.  They begin to solve problems including money.  Students also learn to tell time to the nearest five minutes on analog and digital clocks. |
| **Essential Questions** | 1. How can you use coins to show amounts of money?<br>2. How can you solve problems involving money?<br>3. How can you tell time to the nearest five minutes? |
| **Unit 4: Two Digit Addition and Subtraction**<br>***Timeframe:*** *December - March* | |

*updated 2024-2025*

*\*subject to change\**

| | |
|---|---|
| **Unit Overview** | During this unit, students apply their understanding of place value to add and subtract two-digit numbers.  By the end of the unit, students will be able to fluently add and subtract numbers within 100 by using drawings and equations to solve problems.  They will also begin solving one and two step addition word problems. |
| **Essential Questions** | 1.  How can I add and subtract two digit numbers? <br> 2.  How can I apply place-value understanding to add and subtract two-digit numbers? <br> 3.  How can you fluently add and subtract numbers within 100? <br> 4.  How can you use drawings and equations to solve addition and subtraction problems? <br> 5.  How can you solve one and two step addition and subtraction word problems? |

**Unit 5: Three Digit Addition & Subtraction**
*Timeframe:* *March - April*

| | |
|---|---|
| **Unit Overview** | During this unit, students learn to add and subtract three digit numbers using their foundation of place value and addition and subtraction with two digit numbers. |
| **Essential Questions** | 1.  How can you add three digit numbers? <br> 2.  How can you subtract three digit numbers? |

**Unit 6: Measurement**
*Timeframe:* *April - May*

| | |
|---|---|
| **Unit Overview** | During this unit, students work with measurement and length in standard units of inches, feet, yards, meters, and centimeters.  Students will also solve real world word problems involving these measurements. |
| **Essential Questions** | 1.  How can you estimate and measure the length of objects using inches, feet, and yards? <br> 2.  How can you estimate and measure the length of objects meters and centimeters? <br> 3.  How can you solve measurement word problems? |

**Unit 7: Geometry & Fractions**
*Timeframe:* *June*

| | |
|---|---|
| **Unit Overview** | During this unit, students will begin to build their fraction foundation.  Students can identify and draw equal shares of circles, squares, and rectangles.  Students also can identify and draw two and three dimensional shapes. |

| **Essential Questions** | 1. How do you identify, draw and sort two and three dimensional shapes? |
| | 2. How can you identify, describe, and draw equal shares? |

# 3rd Grade Mathematics

**COURSE DESCRIPTION**

The mathematics curriculum at Empowerment Academy Charter School is designed to prepare all students for their future in the 21st century and offer skills and strategies to be a successful member of their community.  In 1st Grade, students are introduced to the fundamental mathematical concepts and skills aligned to the [New Jersey Student Learning Standards and the Standards for Mathematical Practices](#).  By the end of 3rd Grade, students will begin to develop an understanding of the meanings of multiplication and division of whole numbers through problems involving equal-sized groups, arrays, and area models.  Students also begin to develop an understanding of fractions - starting with unit fractions.  Students understand that the size of a fractional part is relative to the size of the whole.  Students describe, analyze, and compare the properties of 2D shapes.  They measure the area of a shape by finding the total number of same size units of area required to cover the shape without gaps/overlaps.  They begin to relate their fraction work to geometry by expressing areas of shapes.  New for the 2024-2025 school year, students in Third Grade will develop data-based questions, collect student-centered data, and use this data to answer data-based questions.

**COURSE RESOURCES**

- Into Math, K-8 Teacher Edition & Resources (Houghton Mifflin Harcourt)
- Into Math, K-8 Student Edition Workbooks (Houghton Mifflin Harcourt)
- Scope & Sequence Guide
- Manipulatives
- [Virtual Manipulatives](#) (Pearson)
- *Children's Mathematics* (CGI), Heinemann
- Illustrative Mathematics Tasks
- The Writing Revolution (Jossey-Bass)
- MAP Growth, NWEA

**ASSESSMENTS**

| Benchmark Assessments | Formative Assessments | Summative Assessments | Alternative Assessments |
|---|---|---|---|
| ● MAP Growth Test (3 per school year) | ● Class Participation<br>● Class Discussions<br>● Classwork Assignments | ● Quizzes<br>● Unit Tests<br>● Interim Assessments | ● Choice Boards<br>● Projects |

**INTEGRATED ACCOMMODATIONS & MODIFICATIONS**

| Special Education Students | English Language Learners | At Risk Students | 504 Students | Gifted & Talented Students |
|---|---|---|---|---|
| <ul><li>Preferential Seating</li><li>Provide adjusted time/length of assignments</li><li>Provide study guides for assessments</li><li>Provide graphic organizers</li><li>Frequent checks for understanding</li><li>Use of a calculator (if appropriate)</li><li>Use of manipulatives</li></ul> | <ul><li>Link concepts to students' background and experiences</li><li>Use speech appropriate for students' proficiency level</li><li>Provide translated materials and/or audio versions of text (when appropriate)</li></ul> | <ul><li>Preferential seating</li><li>Accept late work without penalty</li><li>Task list for routines/procedures on desk</li><li>Provide graphic organizers</li><li>Provide access to accurate notes</li></ul> | <ul><li>Incorporate student choice</li><li>Provide graphic organizers</li><li>Provide adjusted time/length of assignments</li></ul> | <ul><li>Incorporate student choice</li><li>Incorporate independent studies/projects</li></ul> |

*updated 2024-2025*
*subject to change*

**STANDARDS COVERED BY UNIT**

| | Unit 1 | Unit 2 | Unit 4 | Unit 3 | Unit 5 | Unit 6 |
|---|---|---|---|---|---|---|
| **Operations & Algebraic Thinking (3.OA)** | | | | | | |
| **A.  Represent and solve problems involving multiplication and division.** | | | | | | |
| 1.  Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. (For example, describe and/or represent a context in which a total number of objects can be expressed as 5 x 7.) | ★ | ★ | | | | |
| 2.  Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. | | ★ | | | | |
| 3.  Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem | ★ | ★ | | | | |
| 4.  Determine the unknown whole number in a multiplication or division equation relating three whole numbers.  (For example, determine the unknown number that makes the equation true in each of the equations 8 x ? = 48, 5 = ? ÷ 3, 6 x 6 = ?) | | ★ | | | | |
| **B.  Understand properties of multiplication and the relationship between multiplication and division** | | | | | | |
| 5. Apply properties of operations as strategies to multiply and divide. [Example: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known (Commutative property of multiplication).  3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30, or by 5 x 2 = 10, then 3 x 10 = 30 (Associative property of multiplication).  Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8  x 2) = 40 + 16 = 56 (Distributive Property).]  Students need not use formal terms for these properties. | ★ | ★ | | | | |
| 6. Understand division as an unknown-factor problem. (For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8). | | ★ | | | | |
| **C.  Multiply and divide within 100.** | | | | | | |
| 7. With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. | | ★ | | | | |
| **D.  Solve problems involving the four operations, and identify and explain patterns in arithmetic.** | | | | | | |
| 8.  Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.  (This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses | | ★ | | ★ | ★ | |

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| to specify a particular order) (Order of Operations) | | | | | | |
| 9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. | | ★ | | ★ | | |

**Number and Operations in Base Ten (3.NBT)**

**A. Use place value understanding and properties of operations to perform multi-digit arithmetic**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Use place value understanding to round whole numbers to the nearest 10 or 100. | | | | ★ | | |
| 2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. | | | | ★ | | |
| 3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations. | | ★ | | | | |

**Number and Operations – Fractions (3.NF)**

**A. Develop understanding of fractions as numbers.**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.  For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is ⅓.  Two of those parts would be ⅔. | | | ★ | | | |
| 2. Understand a fraction as a number on the number line; represent fractions on a number line diagram | | | ★ | | | |
| a. Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.  line. For example, partition the number line from 0 to 1 into 3 equal parts, represent ⅓ on the number line and show that each part has a size ⅓. | | | ★ | | | |
| b.  Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. | | | ★ | | | |
| 3.  Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. | | | ★ | | | |
| a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. | | | ★ | | | |
| b.  Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model. | | | ★ | | | |
| c.  Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.  Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point on a number line diagram. | | | ★ | | | |

| Standard | 1 | 2 | 3 | 4 | 5 | 6 |
|---|:--:|:--:|:--:|:--:|:--:|:--:|
| d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. | | | ★ | | | |

**Measurement (3.M)**

**A. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.**

| Standard | 1 | 2 | 3 | 4 | 5 | 6 |
|---|:--:|:--:|:--:|:--:|:--:|:--:|
| 1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. | | | ★ | | | |
| 2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.  "Measure and estimate liquid volumes and masses" excludes compound units such as cm3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison problems (problems involving "times as much"; See Glossary, Tables 2a-2d). | | | | | ★ | |

**B. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.**

| Standard | 1 | 2 | 3 | 4 | 5 | 6 |
|---|:--:|:--:|:--:|:--:|:--:|:--:|
| 3. Recognize area as an attribute of plane figures and understand concepts of area measurement. | ★ | | | | | |
| a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. | ★ | | | | | |
| b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units. | ★ | | | | | |
| 4. Measure areas by counting unit squares (square cm, square m, square in, square ft, and nonstandard units). | ★ | | | | | |
| 5. Relate area to the operations of multiplication and addition. | ★ | | | | | |
| a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. | ★ | | | | | |
| b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. | ★ | | | | | |
| c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning | ★ | | | | | |
| d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non overlapping rectangles and adding the areas of the non-overlapping parts, applying this | ★ | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| technique to solve real world problems. | | | | | |

**C. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.**

| | | | | | |
|---|---|---|---|---|---|
| 6. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. | | | | ★ | | |

## Data Literacy (3.DL)

**A. Understand data-based questions and data collection.**

| | | | | | |
|---|---|---|---|---|---|
| 1. Develop data-based questions and decide what data will answer the question. (e.g., "What size shoe does a 3rd grader wear?", "How many books does a 3rd grader read?") | | | | | ★ | |
| 2. Collect student-centered data (e.g. collect data on students' favorite ice cream flavor) or use existing data to answer data-based questions. | | | | | ★ | |

**B. Represent and interpret data**

| | | | | | |
|---|---|---|---|---|---|
| 3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. (For example, draw a bar graph in which each square in the bar graph might represent 5 pets.) | | | | | ★ | |
| 4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters. | | | | | ★ | |

## Geometry (3.G)

**A. Reason with shapes and their attributes.**

| | | | | | |
|---|---|---|---|---|---|
| 1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. | | | | | | ★ |
| 2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. | | | ★ | | | |

## Mathematical Practices (MP)

| | | | | | |
|---|---|---|---|---|---|
| 1. Make sense of problems and persevere in solving them | ★ | ★ | ★ | ★ | ★ | ★ |
| 2. Reason abstractly and quantitatively | ★ | ★ | ★ | ★ | ★ | ★ |
| 3. Construct viable arguments and critique the reasoning of others. | ★ | ★ | ★ | ★ | ★ | ★ |
| 4. Model with Mathematics | ★ | ★ | | ★ | ★ | |
| 5. Use appropriate tools strategically | ★ | ★ | ★ | ★ | ★ | ★ |
| 6. Attend to precision | ★ | ★ | ★ | ★ | ★ | ★ |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7. Look for and make use of structure. | ★ | ★ | ★ | ★ | ★ | ★ |
| 8. Look for and express regularity in repeated reasoning. | ★ | ★ | ★ | ★ | | ★ |

**OVERVIEW BY UNIT**

| Unit 1: Understand Multiplication and Area<br>*Timeframe:* September | |
|---|---|
| **Unit Overview** | During this unit, students represent multiplication and relate multiplication to area by using area models, arrays, etc. |
| **Essential Questions** | 1. How can you represent multiplication?<br>2. How can you relate multiplication to area? |

| Unit 2: Multiplication and Division<br>*Timeframe:* October - December | |
|---|---|
| **Unit Overview** | During this unit, students begin to solve real world problems using multiplication. Students use multiple strategies to solve these problems and can multiply with multiples of 10. Students also begin to represent division and relate the two operations (division and multiplication). Students use their understanding to solve open response problems involving both operations. |
| **Essential Questions** | 1. How can you solve multiplication problems using multiple multiplication strategies?<br>2. How can you use properties to solve multiplication problems?<br>3. How can you use strategies and properties to multiply by multiples of 10?<br>4. How can you represent division?<br>5. How can you relate multiplication and division?<br>6. How can you solve problems using your multiplication and division knowledge? |

| Unit 4: Fractions<br>*Timeframe:* January - February | |
|---|---|
| **Unit Overview** | During this unit, students |
| **Essential Questions** | 1. How can you represent fractions and show them in different ways? |

| | |
|---|---|
| | 2. How can you relate fractions to area? |
| | 3. How can you compare fractions using symbols? |
| | 4. How can you represent and recognize equivalent fractions? |

**Unit 3: Addition and Subtraction Strategies and Applications**
*Timeframe: February - April*

| | |
|---|---|
| **Unit Overview** | During this unit, students will build on their strategies from 2nd grade to solve addition and subtraction problems within 1,000. Students will apply these problems to perimeter and time. |
| **Essential Questions** | 1. How can you use strategies to solve addition and subtraction problems?<br>2. How can you add and subtract within 1,000?<br>3. How can you solve perimeter problems?<br>4. How do you tell time and solve time related problems? |

**Unit 5: Measurement & Data**
*Timeframe: April - May*

| | |
|---|---|
| **Unit Overview** | During this unit, students interpret data from graphs.  Students also explore liquid volume and mass. |
| **Essential Questions** | 1. How do you estimate and measure mass?<br>2. How can you represent and interpret data on different types of graphs? |

**Unit 6: Geometry**
*Timeframe: May - June*

| | |
|---|---|
| **Unit Overview** | During this unit, students |
| **Essential Questions** | 1. How can you describe two dimensional shapes?<br>2. How can you categorize shapes? |

# 4th Grade Mathematics

## COURSE DESCRIPTION

The mathematics curriculum at Empowerment Academy Charter School is designed to prepare all students for their future in the 21st century and offer skills and strategies to be a successful member of their community.  In 1st Grade, students are introduced to the fundamental mathematical concepts and skills aligned to the [New Jersey Student Learning Standards and the Standards for Mathematical Practices](#).  By the end of 4th Grade, students will develop understanding and fluency with multi-digit multiplication and apply their understandings of models for multiplication (equal sized groups, arrays, area models, etc.) and the distributive property to use efficient and accurate methods for computing products.  Students develop fluency with efficient procedures for multiplying whole numbers and can explain why they work based on place value understanding. Students develop an understanding of dividing to find quotients involving multi-digit dividends and can accurately apply appropriate methods to estimate and mentally calculate quotients and remainders.  Students also develop understanding of fraction equivalence and operations with fractions.  Lastly, students describe, analyze, compare, and classify 2D shapes and begin to solve problems involving symmetry.  New for the 2024-2025 school year, students in Fourth Grade will create data-based questions, develop strategies to collect various types of data and organize data digitally and understand that subsets of data can be selected and analyzed for a particular purpose.   Students will also analyze visualizaitons of a single data set, and draw conclusions that the data supports.

## COURSE RESOURCES

- Into Math, K-8 Teacher Edition & Resources (Houghton Mifflin Harcourt)
- Into Math, K-8 Student Edition Workbooks (Houghton Mifflin Harcourt)
- Scope & Sequence Guide
- Manipulatives
- [Virtual Manipulatives](#) (Pearson)
- *Children's Mathematics* (CGI), Heinemann
- Illustrative Mathematics Tasks
- MAP Growth, NWEA
- iReady, Curriculum Associates

## ASSESSMENTS

| Benchmark Assessments | Formative Assessments | Summative Assessments | Alternative Assessments |
|---|---|---|---|
| <ul><li>MAP Growth Test (3 per school year)</li><li>iReady</li></ul> | <ul><li>Class Participation</li><li>Class Discussions</li><li>Classwork Assignments</li></ul> | <ul><li>Quizzes</li><li>Unit Tests</li><li>Interim Assessments</li></ul> | <ul><li>Choice Boards</li><li>Projects</li></ul> |

**INTEGRATED ACCOMMODATIONS & MODIFICATIONS**

| Special Education Students | English Language Learners | At Risk Students | 504 Students | Gifted & Talented Students |
|---|---|---|---|---|
| <ul><li>Preferential Seating</li><li>Provide adjusted time/length of assignments</li><li>Provide study guides for assessments</li><li>Provide graphic organizers</li><li>Frequent checks for understanding</li><li>Use of a calculator (if appropriate)</li><li>Use of manipulatives</li></ul> | <ul><li>Link concepts to students' background and experiences</li><li>Use speech appropriate for students' proficiency level</li><li>Provide translated materials and/or audio versions of text (when appropriate)</li></ul> | <ul><li>Preferential seating</li><li>Accept late work without penalty</li><li>Task list for routines/procedures on desk</li><li>Provide graphic organizers</li><li>Provide access to accurate notes</li></ul> | <ul><li>Incorporate student choice</li><li>Provide graphic organizers</li><li>Provide adjusted time/length of assignments</li></ul> | <ul><li>Incorporate student choice</li><li>Incorporate independent studies/projects</li></ul> |

**STANDARDS COVERED BY UNIT**

| | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 | Unit 7 |
|---|---|---|---|---|---|---|---|
| **Operations & Algebraic Thinking (4.OA)** | | | | | | | |
| **A.  Use the four operations with whole numbers to solve problems.** | | | | | | | |
| 1.  Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations | | ★ | | | | | |
| 2.  Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison | | ★ | | | | | |
| 3.  Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. | | ★ | ★ | | | | |
| **B.  Gain familiarity with factors and multiples.** | | | | | | | |
| 4.  Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1– 100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite. | | | | ★ | | | |
| **C.  Generate and analyze patterns.** | | | | | | | |
| 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. | | | | | | ★ | |
| **Number and Operations in Base Ten (4.NBT)** | | | | | | | |
| **A.  Generalize place value understanding for multi-digit whole numbers.** | | | | | | | |
| 1.  Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right | ★ | | | | | | |
| 2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. | ★ | | | | | | |
| 3. Use place value understanding to round multi-digit whole numbers to any place. | ★ | | ★ | | | | |
| **B.  Use place value understanding and properties of operations to perform multi-digit arithmetic** | | | | | | | |
| 4.  With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm. | ★ | | | | | | |

| Standard | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. | | ★ | ★ | | | | |
| 6. Find whole-number quotients and remainders with up to four-digit dividends and one-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. | | ★ | | | | | |
| **Number & Operations – Fractions (4.NF)** | | | | | | | |
| **A. Extend understanding of fraction equivalence and ordering.** | | | | | | | |
| 1. Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. | | | | ★ | | | |
| 2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. | | | | ★ | | | |
| **B. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.** | | | | | | | |
| 3. Understand a fraction a/b with a > 1 as a sum of fractions 1/b | | | | | ★ | | |
| a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. | | | | | ★ | | |
| b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. | | | | | ★ | | |
| c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. | | | | | ★ | | |
| d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem. | | | | | ★ | | |
| 4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number | | | | | | | |
| a. Understand a fraction a/b as a multiple of 1/b | | | | | ★ | | |
| b. Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a | | | | | ★ | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| fraction by a whole number | | | | | | | |
| c.  Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. | | | | | ★ | | |
| **C.  Understand decimal notation for fractions, and compare decimal fractions.** | | | | | | | |
| 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 100.4 | | | | ★ | ★ | | |
| 6.  Use decimal notation for fractions with denominators 10 or 100. | | | | ★ | | | |
| 7.  Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model. | | | | ★ | | | |
| **Measurement & Data (4.M)** | | | | | | | |
| **A.  Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.** | | | | | | | |
| 1. Know relative sizes of measurement units within one system of units including km, m, cm. mm; 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. Record measurement equivalents in a two column table.   For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | | | | | | | ★ |
| 2. . Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. | | | | ★ | | | ★ |
| 3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems.  For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor. | ★ | | ★ | | | | |
| **B.  Represent and interpret data.** | | | | | | | |
| 4.  Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots | | | | | | | ★ |
| **C.  Geometric measurement: understand concepts of angle and measure angles.** | | | | | | | |
| 5.  Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: | | | | | | | ★ |
| a.   An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one | | | | | | ★ | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| degree angle," and can be used to measure angles. | | | | | | | |
|     b.   An angle that turns through n one-degree angles is said to have an angle measure of n degrees | | | | | | ★ | |
| 6.  Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. | | | | | | ★ | |
| 7.  Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure. | | | | | | ★ | |

**Data Literacy (4.DL)**

  **A.  Organize data and understand data visualizations**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1.  Create data-based questions, generate ideas based on the questions, and then refine the questions. | | | | | | ★ | ★ |
| 2. Develop strategies to collect various types of data and organize data digitally. | | | | | | ★ | ★ |
| 3.  Understand that subsets of data can be selected and analyzed for a particular purpose. | | | | | | ★ | |
| 4.  Analyze visualizations of a single data set, share explanations, and draw conclusions that the data supports. | | | | | | ★ | |

  **B.  Represent and interpret measurement data**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5.  Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection. | | | | | | ★ | ★ |

**Geometry (4.G)**

  **C.  Reason with shapes and their attributes.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1.  Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. | | | | | | ★ | |
| 2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles. | | | | | | ★ | |
| 3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry. | | | | | | ★ | |

**Mathematical Practices (MP)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Make sense of problems and persevere in solving them | ★ | ★ | ★ | ★ | ★ | ★ | ★ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2. Reason abstractly and quantitatively | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| 3. Construct viable arguments and critique the reasoning of others. | | ★ | ★ | ★ | ★ | | ★ |
| 4. Model with Mathematics | ★ | ★ | ★ | ★ | ★ | | ★ |
| 5. Use appropriate tools strategically | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| 6. Attend to precision | ★ | ★ | ★ | ★ | | ★ | ★ |
| 7. Look for and make use of structure. | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| 8. Look for and express regularity in repeated reasoning. | ★ | ★ | ★ | ★ | ★ | | ★ |

**OVERVIEW BY UNIT**

| **Unit 1: Place Value and Whole Number Operations** *Timeframe: September* | |
|---|---|
| **Unit Overview** | During this unit, students can use place value to understand, compare, and order numbers.  Students will be able to add and subtract to solve comparison problems (to a million) and add/subtract whole numbers and assess reasonableness of answers. |
| **Essential Questions** | 1.  How can you use place value to understand and compare numbers? <br> 2.  How can you add and subtract numbers to a million? |
| **Unit 2: Multiplication and Division Problems** *Timeframe: October - November* | |
| **Unit Overview** | During this unit, students solve real world applications of multiplication problems.  Students use properties to solve multiplication problems and can relate division and multiplication.  By the end of the unit, students can multiply by one digit numbers, and can solve division problems. |
| **Essential Questions** | 1.  How do you solve problems using multiplication, division, or addition? <br> 2.  How do you multiply by one digit numbers? <br> 3.  How do you solve problems using multiplication, division, or addition? <br> 4.  How do you represent division? <br> 5.  How do you solve division problems? |

## Unit 3: Extend and Apply Multiplication
*Timeframe: November - December*

| | |
|---|---|
| **Unit Overview** | During this unit, students use multiplication to solve area problems and extend their understanding of multiplication to multiplication of two-digit numbers. |
| **Essential Questions** | 1. How do you multiply two-digit numbers?<br>2. How do you use multiplication to solve area problems? |

## Unit 4: Fractions & Decimals
*Timeframe: December - January*

| | |
|---|---|
| **Unit Overview** | During this unit, students identify factors and multiples of whole numbers. THey compare fractions and find equivalent fractions using a multitude of strategies. Students will relate fractions to decimals and expand on their understanding of money. |
| **Essential Questions** | 1. How do you identify factors and multiplies of a given whole number?<br>2. How do you compare fractions and find equivalent fractions?<br>3. How do you relate fractions and decimals? How do you relate decimals to money? |

## Unit 5: Operations with Fractions
*Timeframe: January - February*

| | |
|---|---|
| **Unit Overview** | During this unit, students add and subtract fractions with like and unlike denominators. Students multiply fractions with whole numbers. |
| **Essential Questions** | 1. How do you add and subtract fractions with like denominators?<br>2. How do you add and subtraction mixed numbers with denominators?<br>3. How do you multiply fractions with whole numbers? |

## Unit 6: Two-Dimensional Figures & Symmetry
*Timeframe: March, May*

| | |
|---|---|
| **Unit Overview** | During this unit, students learn about rays and angles and relate fractions to angles. Students classify 2D shapes and relate 2D shapes to symmetry. |

| | |
|---|---|
| **Essential Questions** | 1. What are lines, rays, and angles? How can you relate fractions to angles?<br>2. How do you identify and classify 2-Dimensional shapes?<br>3. How do you recognize and draw lines of symmetry?<br>4. How do you recognize and generate shape patterns? |

**Unit 7: Measurement, Data & Time**
*Timeframe: April - May*

| | |
|---|---|
| **Unit Overview** | During this unit, students represent and compare customary and metric units and solve real world problems using them. Students solve real world time related problems. |
| **Essential Questions** | 1. How do you represent and compare different customary units?<br>2. How do you represent and compare different metric units?<br>3. How do you solve time related problems? |