



Math
COURSE SYLLABUS

GRADE LEVEL: Two

TEACHERS: Mr. Eric Williams

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SCHOOL YEAR: 2024-2025

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COURSE DESCRIPTION:

The second-grade Math curriculum builds extensively on what was taught in first grade using the **McGraw-Hill Reveal Math Grade 2** textbook. The syllabus is planned and centered using the **Common Core State Standards (CCSS)**.

The construction of Mathematical knowledge continues through the use of manipulative tools and problem-solving discoveries. Students acquire knowledge and skills, and develop an understanding of Mathematics from their own experience. This means that students will be provided with a wide range of meaningful experiences through applying Math in real life contexts and situations, where children will become actively involved in learning. In this way, students will be gradually aided in gaining understanding of the abstract and concrete.

The second grade Math curriculum is divided into seven areas: **Understanding What Math Is; Number and Numeration; Operations and Computation; Data and Chance; Measurement and Reference Frames; Geometry; Patterns, Functions and Algebra.**

Understanding What Math Is: (1) Use different representations to conceptualize problems and relate a number to the quantity it represents. (2) Ask appropriate questions of classmates about their solution strategies. (3) Model real-world situations in different ways. (4) Consider available tools when solving a problem. (5) Look for patterns in operations.

Number and Numeration: (1) Understand the Meanings, Uses, and Representations of Numbers through rote counting, place value and notation, meanings and uses of fractions and number theory. (2) Understand Equivalent Names for Numbers through the use of tally marks, arrays and numerical expressions; learn equivalent names for fractions, decimals and percentages (3) Understand Common Numerical Relations by comparing and ordering numbers

Operations and Computation: Learn to compute accurately through addition and subtraction facts and procedures. Make reasonable estimates through computational estimation. Understand meaning of operations through operational modeling.

Data and Chance: Select and create appropriate graphical representations of collected or given data; analyze or interpret data; understand and apply basic concepts of probability through qualitative probability practice.

Measurement and Reference Frame: Understand the systems and processes of measurement; Use appropriate techniques, tools, units, and formulas in making measurements. These understandings will be derived through the study of the following concepts: length, weight and angles; area, perimeter, volume and capacity; units and systems of measurement; money. We will also use and work to understand reference frames through the examination of temperature and time.

Geometry: Investigate characteristics and properties of two- and three-dimensional geometric shapes via the careful inspection of lines, angles, planes and solid figures. Apply transformations and symmetry in geometric situations.

Patterns, Functions and Algebra: Understand patterns and functions; use algebraic notation to represent and analyze situations and structures. Study arithmetic operations by familiarizing ourselves with the commutative and associative properties of addition.

COURSE OBJECTIVES:

Quarter 1

- ❖ Tell my math story
- ❖ Recognize the ways in which we are all doers of math
- ❖ Make sense of a problem and explore solution pathways
- ❖ Think about numbers in different ways
- ❖ Represent a real-world situation using math
- ❖ Explain how to use tools to solve a problem
- ❖ Explain my thinking
- ❖ Listen to the ideas of my classmates
- ❖ Describe and extend a pattern
- ❖ Use patterns to solve problems
- ❖ Explain how to work well on my own and in a group
- ❖ Describe the steps I can take to solve math problems
- ❖ Count and represent whole numbers as lengths from 0 on a number line.
- ❖ Practice partnership principles while solving addition and subtraction number stories.
- ❖ Count tallies and calculate the value of coin combinations.
- ❖ Use patterns to solve an open response problem.
- ❖ Explore even and odd numbers using concrete and visual models.
- ❖ Skip count on calculators and number grids.
- ❖ Look for place-value patterns.
- ❖ Explore place-value concepts with money.
- ❖ Write and solve addition number stories.
- ❖ Explore doubles and combinations of 10 to build fact fluency.
- ❖ Generate equivalent names for numbers.
- ❖ Solve an open-response problem using personal fact strategies.
- ❖ Write subtraction number stories.

- ❖ Generate addition and subtraction facts.

Quarter 2

- ❖ Discuss and use counting-up and counting-back strategies for subtraction.
- ❖ Explore the -0 and -1 fact strategies.
- ❖ Use doubles to solve subtraction facts.
- ❖ Use the going-back-through -10 strategy for subtraction.
- ❖ Use the going-up-through -10 strategy for subtraction.
- ❖ Explore rectangles, fact wheels and coins.
- ❖ Tell time to the nearest hour, half hour and five minutes using a.m. and p.m.
- ❖ Discuss place value and represent 3-digit numbers using base-10 blocks and expanded form.
- ❖ Make sense of a 3-digit number represented by base-10 blocks
- ❖ Analyze explanations and drawings.
- ❖ Use base-10 blocks to model addition and subtraction.
- ❖ Match subtraction facts with arrays.
- ❖ Develop math-fact power by using mental strategies to add two 1-digit numbers.
- ❖ Use money for counting, making equivalencies and buying.
- ❖ Make arrays and match clock faces to digital notation.

Quarter 3

- ❖ Measure objects with a foot-long ruler.
- ❖ Use the inch and centimeter to measure.
- ❖ Develop strategies for mentally adding and subtracting 10 and 100.
- ❖ Use an open-number line as a tool for solving number stories.
- ❖ Solve change-to-more number stories.
- ❖ Solve parts-and-total number stories.
- ❖ Solve change number stories involving temperature.
- ❖ Complete and open response problem by solving an addition problem.
- ❖ Draw picture and bar graphs to represent data sets.
- ❖ Solve comparison number stories.
- ❖ Choose diagrams to use for solving number stories.
- ❖ Solve two-step number stories.
- ❖ Make ballpark estimates.
- ❖ Invent and record personal strategies for solving addition problems.
- ❖ Use base-10 blocks to find partial sums.
- ❖ Build readiness for partial-sum addition.
- ❖ Subtract with base-10 blocks.
- ❖ Explore arrays, lengths and shapes.
- ❖ Find differences between 2-digit numbers and multiples of 10.
- ❖ Work on addition of four or more addends, and openly discuss solutions.
- ❖ Explore U.S. customary length units and measures to the nearest yard.
- ❖ Find personal references for metric units of measure.
- ❖ Choose appropriate units and tools to estimate and measure lengths.
- ❖ Measure lengths to nearest centimeter and inch.
- ❖ Discuss the shortest and longest standing jumps, and create plot lines with data.

Quarter 4

- ❖ Use arm spans to make a frequency table and make a line plot for a set of data.
- ❖ Sort shapes, draw a picture graph and measure body parts.

- ❖ Describe the attributes of 2-dimensional shapes.
- ❖ Identify shapes.
- ❖ Build and compare various polygons.
- ❖ Draw and reason about quadrilaterals.
- ❖ Sort and compare 3-D shapes.
- ❖ Partition rectangles into same-size squares.
- ❖ Solve number stories about equal groups and arrays.
- ❖ Build equal groups and arrays and write models for them.
- ❖ Describe attributes of shapes and build polygons with trapezoids.
- ❖ Work with fractions on a geoboard.
- ❖ Divide shapes and use fraction vocabulary.
- ❖ Explore equal shares of different shapes and use pattern blocks to divide shapes.
- ❖ Measure lengths to nearest half-inch.
- ❖ Write multi-digit numbers in expanded form and compare them.
- ❖ Use base-10 blocks to solve subtraction problems.
- ❖ Use expand-and-trade subtraction.
- ❖ Practice finding coin and bill combinations with equivalent values.
- ❖ Estimate costs.
- ❖ Solve number stories about two equal groups.
- ❖ Skip count and add to solve problems involving multiples of 10 and 5.

ASSESSMENT:

Students will be assessed with class participation, observation, homework, class work, objective quizzes/tests, oral responses, and quarterly exams. The student's final grade will be computed mainly based on three parts: performance tasks (homework and class work), quizzes and quarterly exams. Each part is weighted at one third of the total course grade.

Quizzes will relate to current and previous topics. A quiz may be given at any time during any class period—immediately after a lecture, at the beginning or end of a class, etc. Students absent from class for a test or a quiz must make arrangements to take the quiz or test some other time.

It is very important that you complete the assigned worksheets/Homework sections. Worksheets/Homework Sections and test papers will be checked for completeness and returned. The scores will be given.

Academic Dishonesty means employing a method or technique or engaging in conduct in an academic endeavor that contravenes the standards of ethical integrity expected at DIS. Academic dishonesty includes but is not limited to, the following:

1. Purposely incorporating the ideas, words of sentences, paragraphs, or parts thereof without appropriate acknowledgment and representing the product as one's own work; and
1. Representing another's intellectual work such as photographs, paintings, drawings, sculpture, or research or the like as one's own, including failure to attribute content to an AI.
2. Employing a tutor, making use of Artificial Intelligence without acknowledgement, getting a parent to write a paper or do an assignment, paying for an essay to be written by someone else and presented as the student's own work.
3. Committing any act that a reasonable person would conclude, when informed of the evidence, to be a dishonest means of obtaining or attempting to obtain credit for academic work.

Any act of academic dishonesty will result in an automatic zero on the entire assignment

PRIMARY TEXTBOOK & OTHER RESOURCES

Reveal Math 2, McGraw-Hill Education, 2022.

ADDITIONAL INFORMATION – Please see Google Classroom for more information.

Schedule of Instruction

1st QUARTER – TENTATIVE COURSE CONTENT

Week / Date	Topic
Week 1 Aug 12th to 16th 2 Days of Class <i>10~ First Day / Orientation Day</i>	Unit 1: Math Is... L1: Math Is Mine
Week 2 Aug 19th to 13th <i>Opening Mass</i>	L2: Math Is Exploring and Thinking L3: Math Is In My World L4: Math Is Explaining and Sharing L5: Math Is Finding Patterns L6: Math Is Ours
Week 3 Aug 27 to 30th	Unit 2: Place Value to 1,000 L1: Understand Hundreds L2: Understand 3-Digit Numbers L3: Read and Write Numbers to 1,000
Week 4 Sept 2-6	L4: Decompose 3-Digit Numbers L5: Compare 3-Digit Numbers
Week 5 Sep 9 to 13	Unit 3: Patterns Within Numbers L1: Counting Patterns L2: Patterns When Skip-Counting by 5s L3: Patterns When Skip-Counting by 10s and 100s
Week 6 Sep 16 (one day) Moon Festival Tuesday <i>Teachers Conference no classes</i>	L3: Patterns When Skip-Counting by 10s and 100s L4: Understand Even and Odd Numbers L5: Addition Patterns
Week 7 Sep 23 to 27 <i>Pre-exam days</i>	L6: Patterns with Arrays L7: Use Arrays to Add
Week 8 Sep 30 to Oct 4 <i>Teacher's Conference/Moon Festival</i>	Review for exams
Week 9 Oct 7 to 11	Review/Quarter Exams

2nd QUARTER – TENTATIVE COURSE CONTENT

Week / Date	Topic
Week 1 (10) Oct 14-18 4 Days of Class Monday record day No class	Unit 4: Meanings of Addition and Subtraction L1: Represent and Solve /Add to Problems L2: Represent and Solve /Take from Problems L3: Solve Two-Step Add to and Take from Problems
Week 2 (11) Oct 21 to 25	L3: Solve Two-Step Add to and Take from Problems L4: Represent and Solve Put Together Problems L5: Represent and Solve Take Apart Problems L6: Solve Two-Step Put Together and Take Apart Problems
Week 3 (12) Oct 28-Nov 1 <i>1-All Saint's Day Mass</i>	L7: Represent and Solve Compare Problems L8: Represent and Solve More Compare Problems L9: Solve Two-Step Problems with Comparison L10: Solve Two-Step Problems Using Addition and Subtraction
Week 4 (13) Nov 4-8	Unit 5: Strategies to Fluently Add Within 100 L1: Strategies to Add Fluently Within 20 L2: More Strategies to Add Fluently Within 20 L3: Represent Addition with 2-Digit Numbers L4: Use Properties to Add
Week 5 (14) Nov 11 to 15	L5: Decompose Two Addends to Add L6: Use a Number Line to Add L7: Decompose One Addend to Add
Week 6 (15) Nov 18 to 22	L8: Adjust Addends to Add L9: Add More Than Two Numbers L10: Solve One- and Two-Step Problems Using Addition
Week 7 (16) Nov 25 to 29 Pre-exam days 26-28	Unit 6: Strategies to Fluently Subtraction Within 100 L1: Strategies to Subtract Fluently Within 100 L2: More Strategies to Subtract Fluently Within 100 L3: Represent Subtraction with 2-Digit Numbers L4: Represent 2-Digit Subtraction with Regrouping L5: Use a Number Line to Subtract
Week 8 (17) Dec 2 to 6	L6: Decompose Numbers to Subtract L7: Adjust Numbers to Subtract L8: Relate Addition to Subtract L9: Solve One-Step Problems Using Subtraction (review) L10: Solve Two-Step Problems Using Subtraction (review) Review lessons 9-10
Week 9 Dec 9 to 13	Exams

Dec 16 to Jan 3

Christmas Break

3rd QUARTER – TENTATIVE COURSE CONTENT

Week / Date	Topic
Week 1 (19) Jan 7-10 Jan 6 no class Record Day <u>New Year Mass</u>	Unit 7: Measure and Compare Lengths L1: Measure Length with Inches L2: Measure Length with Feet and Yards L3: Compare Length Using Customary Units
Week 2 (20) Jan 13 to 17	L4: Relate Inches, Feet and Yards L5: Estimate Length Using Customary Units L6: Measure Length with Centimeters and Meters L7: Compare Lengths Using Metric Units L8: Relate Centimeters and Meters
Week 3 (21) Jan 20 to 24 Feast day of St. Thomas Aquinas	L9: Estimate Length Using Metric Unit L10: Solve Problems Involving Length L11: Solve More Problems Involving Length
Chinese New Year Jan 27 to 31	NO CLASSES CHINESE NEW YEAR
Week 4 (22) Feb 3 to 7	Unit 8: Measurement: Money and Time L1: Understand the value of coins L2: Solve Money Problems Involving Coins L3: Solve Money Problems Involving Dollar Bills and Coins L4: Tell Time to the Nearest Five Minutes
Week 5 (23) Feb 10 to 14	L5: Be Precise When Telling Time Unit 9: Strategies to Add 3-Digit Numbers L1: Use Mental Math to Add 10 to 100 L2: Represent Addition with 3-Digit Numbers
Week 6 (25) Feb 17 to 21	L3: Represent Addition with 3-Digit Numbers with Regrouping L4: Decompose Addends to Add 3-Digit Numbers L5: Decompose One Addend to Add 3-Digit Numbers L6: Adjust Addends to Add 3-Digit Numbers
Week 7 (26) Feb 24-28 2/28 no classes	L7: Explain Addition Strategies Unit 10: Strategies to Subtract 3-Digit Numbers L1: Use Mental Math to Subtract 10 to 100

4 days of classes	
Week 8 (27) March 3-7	L2: Represent Subtraction with 3-Digit Numbers L3: Decompose One 3-Digit Number to Count Back L4: Count On to Subtract 3-Digit Numbers L5: Regroup Tens L6: Regroup Tens and Hundreds Review for exams
Week 9 (28) March 10-14 4 Days of Class <i>Friday is Q3Exam Day</i> <i>1/2 day</i>	Review for exams

4th QUARTER – TENTATIVE COURSE CONTENT

<i>(NB: Depending on time and interest, the teacher may delete and/or add other selections.)</i>	
Week / Date	Topic
Week 1 (29) March 18 to 21 4 Days of Class <i>Monday is Q3Exam Day</i>	L7: Adjust Numbers to Subtract 3-Digit Numbers L8: Explain Subtraction Strategies L9: Solve Problems Involving Addition and Subtraction
Week 2 (30) March 24 to 28	Unit 11: Data Analysis L1: Understand Picture Graphs L2: Understand Bar Graphs L3: Solve Problems Using Bar Graphs
Week 3 (31) March 31-April 3 April 4th Holiday	L4: Collect Measurement Data L5: Understand Line Plots L6: Show Data on a Line Plot
Week 4 (32) Apr 7 to 11	Unit 12: Geometric Shapes and Equal Shares L1: Recognize 2-Dimensional Shapes by Their Attributes L2: Draw 2-Dimensional Shapes from Their Attributes
Apr 14-18	Easter/Spring Break
Week 5 (34) Apr 22 to 25	L3: Recognize 3-Dimensional Shapes by Their Attributes L4: Understand Equal Shares
Week 6 (35) April 28 to May 2	L5: Relate Equal Shares L6: Partition a Rectangle into Rows and Columns
Week 7 (37) May 5 to 9	Q4: Review for Exams

Week 8 (38) May 12- 15 May 16 no classes Record Day	Exams
Week 9 (39) May 19to 23	End-of-the-Year Activities
Week 10 (40) May 26-29	Last week End-of-the-Year Activities