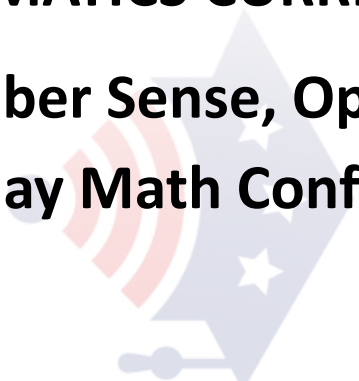


3rd Grade American Online School

MATHEMATICS CURRICULUM

Building Number Sense, Operations, and Everyday Math Confidence



Version May/2025

1. Introduction

The Role of Mathematics Education in 3rd Grade

The 3rd Grade Math curriculum strengthens students' mastery of foundational skills while introducing more complex operations, problem-solving strategies, and real-world applications. Learners explore place value, number operations, and money management through hands-on activities, visual models, and contextual math challenges. Emphasis is placed on reasoning, communication, and fluency in both computation and concept.

By the end of this course, students will:

- ✓ Read, write, and compare multi-digit numbers up to 1,000,000.
 - ✓ Fluently add and subtract within 1,000.
 - ✓ Solve real-world word problems involving all four operations.
 - ✓ Understand and apply the concepts of multiplication and division.
 - ✓ Use strategies to reason about money, including making change.
 - ✓ Communicate mathematical thinking through models and explanations.
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2. Core Competence Areas

MTH.1 Number Sense and Place Value

Learning Outcomes

By the end of this course, students will be able to:

- ✓ Understand the value of digits in numbers up to 1,000,000.
- ✓ Use expanded form, base-ten blocks, and number lines.
- ✓ Compare and order numbers using symbols and vocabulary.

Competencies

MTH.1.A.1 – Exploring place value structure.

- Read, write, and decompose large numbers using place value charts.
- Explain the meaning of each digit in a multi-digit number.

MTH.1.A.2 – Representing and comparing numbers.

- Use number lines, value disks, and pictorial representations.
- Compare numbers using greater than, less than, and equal signs.

MTH.2 Addition and Subtraction Strategies

Learning Outcomes

By the end of this unit, students will be able to:

- ✓ Add and subtract multi-digit numbers with and without regrouping.
- ✓ Apply properties of operations to solve problems.
- ✓ Estimate sums and differences using rounding.

Competencies

MTH.2.A.1 – Mastering fluency in addition and subtraction.

- Use standard algorithm, number bonds, and strip diagrams.
- Solve two- and three-digit problems mentally and on paper.

MTH.2.A.2 – Applying operations to real-world contexts.

- Solve multi-step word problems involving “how many more” or “how many less.”
 - Explain thinking using written explanations and math drawings.
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MTH.3 Multiplication and Division Foundations

Learning Outcomes

By the end of this unit, students will be able to:

- ✓ Understand multiplication as repeated addition and arrays.
- ✓ Relate multiplication and division using fact families.
- ✓ Solve simple word problems using all four operations.

Competencies

MTH.3.A.1 – Modeling multiplication using arrays and area models.

- Use counters, skip counting, and visual patterns to solve.
- Memorize multiplication facts through 10×10 .

MTH.3.A.2 – Understanding division as sharing and grouping.

- Use pictures and manipulatives to represent division problems.
 - Write division number sentences and solve inverse multiplication problems.
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MTH.4 Application: Word Problems and Money

Learning Outcomes

By the end of this unit, students will be able to:

- ✓ Interpret and solve multistep word problems.
- ✓ Use logical reasoning and model drawing to represent thinking.
- ✓ Apply money knowledge in everyday scenarios.

Competencies

MTH.4.A.1 – Solving real-world math challenges.

- Read and interpret word problems with unknowns in any position.
- Use bar models or tables to organize information.

MTH.4.A.2 – Counting and calculating with money.

- Identify and count coins and bills to \$100.
 - Make change and solve problems involving totals, costs, and savings.
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3. Assessment and Evaluation

Formative Assessments – Skill Checks and Journaling

- ✓ Daily exit tickets and quick check-ins.
- ✓ Math journals with model drawings.
- ✓ Small-group strategy shares.

Summative Assessments – Unit Challenges and Quizzes

- ✓ Place Value Unit Test.
- ✓ Timed Fact Fluency Checks.
- ✓ Word Problem Scenario Assessments.

Authentic Assessment – Projects and Presentations

- ✓ Budget Planning Simulation.
 - ✓ Math Vocabulary Storybook.
 - ✓ End-of-Year Math Fair (interactive stations, games, problems).
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4. Instructional Strategies for Online Learning

Visual and Concrete Learning

- ✓ Use number lines, base-ten blocks, coins, and pictorial models.
- ✓ Connect numbers to real-world quantities.

Collaborative and Reflective Practice

- ✓ Partner “math talks” and group problem-solving stations.
- ✓ Peer editing of math stories and journals.

Digital Tools and Enrichment

- ✓ Use digital tools for practice and challenge.
- ✓ Create digital math stories or quizzes.

Learning Culture

- ✓ Promote a safe environment to take risks and make mistakes.
- ✓ Celebrate personal growth and resilience.
- ✓ Encourage mathematical curiosity through games and real-life application.

