LIBERTY UNIVERSITY | Online Academy

2nd Grade Math

MAT0200

Course Description

The second-grade standards extend the study of number and spatial sense to include three-digit whole numbers and solid geometric figures. Students will continue to learn, use, and gain proficiency in the basic addition facts through the tens table and the corresponding subtraction facts. Students will begin to use U.S. Customary and metric units of measure; predict, using simple probability; and create and interpret picture and bar graphs. Students will work with a variety of patterns and will develop knowledge of equality by identifying missing numbers in addition and subtraction facts. Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to correctly use the concepts, skills, symbols, and vocabulary identified in the following set of standards. Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

Rationale

The Liberty University Online Academy's 2nd grade math course will develop number sense within each student. It will prepare students for the next level of math. The Biblical basis for math and real-life activities will be presented to show the need for and usefulness of mathematics in the world. Reviews and speed drills will be implemented for basic math recall. This is all to prepare the student by building new concepts upon previous concepts.

Prerequisite

1st Grade Math

Measurable Learning Outcomes

A. The student will understand and explore whole number concepts, ordinals, and place value.
B. The student will understand and explore whole fractions and fraction concepts.
C. The student will explore and understand algebraic concepts and geometric and numerical patterns.

D. The student will classify and explore attributes of objects and shapes.
E. The student will understand, explore, and solve problems involving addition and subtraction.
F. The student will understand, explore, and solve problems involving multiplication and division.
G. The student will understand and explore concepts of time and money.
H. The student will explore and understand measurement in standard and non-standard units.
I. The student will collect and display data using a variety of methods.

Course Materials

See LUOA's Systems Requirements for computer specifications necessary to operate LUOA curriculum. Also view Digital Literacy Requirements for LUOA's expectation of users' digital literacy.

This course contains additional physical materials. See the materials page toward the end of this syllabus for a listing of course materials.

This course makes use of third-party digital resources to enhance the learning experience. These resources have been curated by LUOA staff and faculty and can be safely accessed by students to complete coursework. Please ensure that internet browser settings, pop-up blockers, and other filtering tools allow for these resources to be accessed.

The following resource(s) are used throughout this course:

Education City
Reading Eggs

Note: Embedded YouTube videos may be utilized to supplement LUOA curriculum. YouTube videos are the property of the respective content creator, licensed to YouTube for distribution and user access. As a non-profit education institution, LUOA is able to use YouTube video content under the YouTube Terms of Service and the provisions of the TEACH Act of 2001. For additional information on copyright, please contact the Jerry Falwell Library.

Course Grading Policies

The students' grades will be determined according to the following grading scale and assignment weights. The final letter grade for the course is determined by a 10-point scale. Assignments are weighted according to a tier system, which can be referenced on the Grades Page in Canvas. Each tier is weighted according to the table below. Items that do not affect the student's grade are found in Tier 0.

Grading Scale	
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Assignment Weights	
Tier 0	0%
Tier 1	25%
Tier 2	35%
Tier 3	40%

Course Policies

Students are accountable for *all* information in the Student Handbook. Below are a few policies that have been highlighted from the Student Handbook.

Types of Assessments

To simplify and clearly identify which policies apply to which assessment, each assessment has been categorized into one of four categories: Lesson, Assignment, Quiz, or Test. Each applicable item on the course Modules page has been designated with an identifier chosen from among these categories. Thus, a Quiz on the American Revolution may be designated by the title, "1.2.3 *Quiz*: The American Revolution." These identifiers were placed on the Modules page to help students understand which Honor Code and Resubmission policies apply to that assessment (see the Honor Code and Resubmission policies on the pages to follow for further details).

- **Lesson:** Any item on the Modules page designated as a "Lesson"
  These include instructional content and sometimes an assessment of that content. Typically, a Lesson will be the day-to-day work that a student completes.
- **Assignment:** Any item on the Modules page designated as an "Assignment"
  Typical examples of Assignments include, but are not limited to, papers, book reports, projects, labs, and speeches. Assignments are usually something that the student should do their best work on the first time.
- **Quiz:** Any item on the Modules page designated as a "Quiz"
  This usually takes the form of a traditional assessment where the student will answer questions to demonstrate knowledge of the subject. Quizzes cover a smaller amount of material than Tests.
- **Test:** Any item on the Modules page designated as a "Test"
  This usually takes the form of a traditional assessment where the student will answer questions to demonstrate knowledge of the subject. Tests cover a larger amount of material than Quizzes.

Resubmission Policy

Students are expected to submit their best work on the first submission for every Lesson, Assignment, Quiz, and Test. However, resubmissions may be permitted in the following circumstances:

- **Lesson:** Students are automatically permitted two attempts on a Lesson. The student may freely resubmit for their first two attempts without the need for teacher approval.

- **Assignment:** Students are intended to do their best work the first time on all Assignments. However, any resubmissions must be completed before the student moves more than one module ahead of that Assignment. For example, a student may resubmit an Assignment from Module 3 while in Module 4, but not an Assignment from Modules 1 or 2. High School students may not resubmit an Assignment without expressed written permission from the teacher in a comment.
- **Quiz:** Students may NOT resubmit for an increased grade.
- **Test:** Students may NOT resubmit for an increased grade.

If a student feels that he or she deserves a resubmission on a Lesson, Assignment, Quiz, or Test due to a technical issue such as computer malfunctioning, the student should message his or her teacher to make the request, and that request will need to be approved by a Department Chair.

Consequences for Violations to the Honor Code

Every time a student violates the Honor Code, the teacher will submit an Honor Code Incident Report. The Student Support Coordinator will review the incident and allocate the appropriate consequences. Consequences, which are determined by the number of student offences, are outlined below:

- **Warning:** This ONLY applies to high school Lessons and elementary/middle school Assignments and Lessons. These will be taken as a teaching moment for the student.
    - **Lessons:** A zero will be assigned for the question only.
    - **Elementary/Middle School Assignment:** The student must redo their work. However, they may retain their original grade.
- **1st Offense:**
    - **Lesson, Quiz, or Test:** The student will receive a zero on the entire assessment.
    - **Assignment:** The student will either:
        - Receive a 0% on the original assignment
        - Complete the Plagiarism Workshop
        - Retry the assignment for a max grade of 80%
- **2nd Offense:** The student will receive a zero and be placed on Academic Probation.
- **3rd Offense:** The student will receive a zero and the Faculty Chair will determine the consequences that should follow, possibly including withdrawal from the course or expulsion from the academy.

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Materials List

2nd Grade Math

General Supplies

Notebook for Math Journal
Colored pencils or markers
Printer and paper
Construction Paper
Glue (stick and liquid form)
Scissors
Ruler

Module 1

General Supplies (see above)

Module 2

General Supplies (see above)
Dried beans
Wooden craft sticks
3 Dice
Base 10 Blocks

Module 3

General Supplies (see above)
Rings for binding (or something similar)

Module 4

General Supplies (see above)

Module 5

General Supplies (see above)

Module 6

General Supplies (see above)

Module 7

General Supplies (see above)
Black marker
Large piece of construction paper
Paper plate
Paper fasteners

Module 8

Paint

Module 9

General Supplies (see above)
Play Money (pennies, nickels, dimes, quarters, half dollars, & dollars)

Module 10

General Supplies (see above)

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Scope and Sequence

2nd Grade Math

Module 1: Place Value to 100's

Week 1: Understanding Digits
Week 2: Expanded Form
Week 3: Odd and Even Numbers

Module 2: Place Value to 1,000

Week 4: Base 10 Modeling
Week 5: Writing and Modeling Place Value up to 1,000
Week 6: Counting Back by 10s and 100s
Week 7: Review

Module 3: Relationships of Basic Facts

Week 8: Addition Fact Families (Related Facts)
Week 9: Making Ten with Addition
Week 10: Making Ten with Subtraction
Week 11: Problem Solving Strategies and Word Problems

Module 4: Two-Digit Addition

Week 12: Addition with Regrouping
Week 13: Expanded Form
Week 14: 2-Digit Addends and Bar Modeling
Week 15: Review

Module 5: Two-Digit Subtraction

Week 16: Breaking Apart an Addend to Subtract
Week 17: Regrouping in Subtraction
Week 18: Representation in Problem Solving

Module 6: Graphing

Week 19: Tally Charts and Pictographs
Week 20: Bar Graphs

Module 7: Measurement

Week 21: Length
Week 22: Standard and Non-Standard Units of Measurement
Week 23: Estimating Length Measurement
Week 24: Weight Measurement
Week 25: Capacity
Week 26: Calendar & Clocks

Module 8: Geometry

Week 27: Shapes
Week 28: Symmetry
Week 29: Patterns

Module 9: Money

Week 30: Pennies, Nickels, and Dimes
Week 31: Quarters
Week 32: Half-Dollars
Week 33: Adding All Money

Module 10: Multiplication

Week 34: Skip Counting
Week 35: Groups and Arrays
Week 36: Multiplication Chart