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. LUOA staff and faculty have curated these resources. Students can safely access them to complete coursework. Please ensure that internet browser settings, pop-up blockers, and other filtering tools allow for these resources to be accessed. See Technologies and Resources Used in this Course below for a specific list.

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 educational institution, LUOA is able to use YouTube video content under the YouTube Terms of Service. For additional information on copyright, please contact the Jerry Falwell Library.

Materials Required for Purchase
The following materials are required in this course:

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

Technologies and Resources Used in this Course
The following resource(s) are used throughout this course:

- Education City
- Reading Eggs

Course Grading Policies
The student’s 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.

<table>
<thead>
<tr>
<th>Grading Scale</th>
<th>Assignment Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 90-100%</td>
<td>Tier 0 0%</td>
</tr>
<tr>
<td>B 80-89%</td>
<td>Tier 1 25%</td>
</tr>
<tr>
<td>C 70-79%</td>
<td>Tier 2 35%</td>
</tr>
<tr>
<td>D 60-69%</td>
<td>Tier 3 40%</td>
</tr>
<tr>
<td>F 0-59%</td>
<td></td>
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</tbody>
</table>

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.W 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 that 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 his or her 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 a computer malfunction, 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 offenses, are outlined below:

- **Warning**: This ONLY applies to high school Lessons and elementary/middle school Assignments and Lessons. Students should view these actions as learning opportunities.
  - **Lessons**: A zero will be assigned for the question only.
  - **Elementary/Middle School Assignment**: The student must redo his or her work; however, the student may retain his or her original grade.

- **1st Offense**:
  - **Lesson, Quiz, or Test**: The student will receive a 0% 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 maximum grade of 80%

- **2nd Offense**: The student will receive a 0% and be placed on academic probation.

- **3rd Offense**: The student will receive a 0% and the Faculty Chair will determine the consequences that should follow, possibly including withdrawal from the course or expulsion from the academy.
Materials List
2nd Grade Math

General Supplies
Notebook for Math Journal
Deck of Playing Cards (Option: You can print a set from the lesson.)
Dice (at least 3)
Colored pencils or markers
Construction Paper
Glue (stick and liquid form)
Scissors
Ruler

Module 1
General Supplies (see above) (Optional Purchase)
Book- How Many Seeds in a Pumpkin?
Saltine crackers, pretzel sticks, and cheerios
(Option: Print the base ten paper blocks from the lesson.)

Module 2
General Supplies (see above)
3 Dice
red and white construction paper
2 metal brads

Module 3
General Supplies (see above)
Find 10 items in your house that you can use for a game.
(Suggestions might be toy cars, plastic insects, marbles, clothespins, dominoes, etc.)
Ziploc bag

Module 4
General Supplies (see above)
(Optional Purchase)
Book- Splash! by Ann Jonas

Module 5
General Supplies (see above)

Module 6
General Supplies (see above)
Coins (pennies, dimes, nickels, quarters)
(Optional Print: You may print paper coins from the lesson if you do not have access to play or real coins.)

Module 7
General Supplies (see above)
Scale to measure pounds
Balance Scale
Can of Soup
Analog Clock

Module 8
Construction paper
5 white paper plates
5 different color paints
Paintbrush
Scissors
Black marker
String
Mirror
Pattern blocks
Grid paper
Mini marshmallows
Toothpicks

Module 9
General Supplies (see above) Book - Cloudy With a Chance of Meatballs by Judi Barrett
Individual bag of M&Ms
Bowl or cup
Glue
Scissors
Paper bag
Small cup
Paper plate
20 pennies
Poster board
Markers or crayons or paint

Module 10
General Supplies (see above)
Module 1: Counting and Place Value
Week 1: Counting and Skip Counting
Week 2: Ones and Tens Review
Week 3: Ones, Tens, and Hundreds
Week 4: Thinking about Numbers

Module 2: Numbers
Week 5: Addition and Subtraction Strategies 1
Week 6: Addition and Subtraction Strategies 2
Week 7: Ordering Numbers
Week 8: Comparing Numbers

Module 3: Rounding and Ordinal Numbers
Week 9: Rounding Strategies
Week 10: Rounding Practice
Week 11: Ordinal Numbers Part 1
Week 12: Ordinal Numbers Part 2

Module 4: Addition, Subtraction, and Related Facts
Week 13: Addition Fluency
Week 14: Addition Strategies
Week 15: Related Facts

Module 5: Properties of Operation, Estimation, and Word Problems
Week 16: Addition Properties
Week 17: Estimation
Week 18: Word Problems

Module 6: Money
Week 19: Coins
Week 20: Dollars
Week 21: Adding Coins and Dollars

Module 7: Measurement
Week 22: Length
Week 23: Weight and Degrees
Week 24: Time

Module 8: Fractions and Geometry
Week 25: Introduction to Fractions
Week 26: Comparing Fractions
Week 27: Symmetry
Week 28: Plane and Solid Figures

Module 9: Probability
Week 29: Introduction to Probability
Week 30: Probability
Week 31: Data and Statistics
Week 32: Patterns

Module 10: Algebra and Module Reviews
Week 33: Algebra
Week 34: Module 1-3 Reviews and Assessments
Week 35: Module 4-6 Reviews and Assessments
Week 36: Module 7-9 Reviews and Assessments