

MAT0100_202338_Staging_EMBR_TEM

MAT-100

2023 05/01/2023 to 04/30/2024 Modified 03/22/2023

Course Description

This math course helps students continue to build and strengthen their math skills. Students will continue to learn about counting, comparing, and ordering sets of up to 110 objects; recognizing and describing simple repeating and growing patterns; and tracing, describing, and sorting plane figures. Students will also learn to recognize and describe part-whole relationships for numbers up to 10 and solve story and picture problems using addition and subtraction within 20. Additionally, students will use nonstandard units to measure, organize, and interpret data. Moreover, students will learn about fractional concepts involving halves and fourths. The students will continue to deepen their education through these areas with biblical integration throughout the course!

Rationale

In this course, students explore different types of numbers and mathematical problems. Hands-on learning and student involvement in constructing knowledge are essential for successful learning outcomes. Hands-on activities are provided to both enrich and instruct and to create a higher level of thinking. Students will be involved in performing tasks that will be utilized to demonstrate comprehension of each math standard.

Course Learning Outcomes

- A. The student will orally count forward to 110 and backwards 1 and 30 by ones.
- B. The student will orally count forward by ones, twos, fives, and tens to determine the total number of objects to 110.
- C. The student will write the numerals 0 to 110 in sequence and out-of-sequence.
- D. The student, given up to 110 objects, will group a collection into tens and ones and write the corresponding numeral.
- E. The student will compare two numbers between 0 and 110 represented pictorially or with concrete objects, using the words greater than, less than, or equal to.
- F. The student will order three or fewer sets from least to greatest and greatest to least.
- G. The student, given an ordered set of ten objects and/or pictures, will indicate the ordinal position of each object, first through tenth.
- H. The student will represent and solve practical problems involving equal sharing with two or four sharers.
- I. The student will represent and name fractions for halves and fourths, using models.
- J. The student, given a familiar problem situation involving magnitude, will select a reasonable order of magnitude from three given quantities: a one-digit numeral, a two-digit numeral, and a three-digit numeral (e.g., 5, 50, 500); and explain the reasonableness of the choice.
- K. The student will create and solve single-step story and picture problems using addition and subtraction within 20.
- L. The student will recognize and describe with fluency part-whole relationships for numbers up to 10; and demonstrate fluency with addition and subtraction within 10.

- M. The student will determine the value of a collection of like coins (pennies, nickels, or dimes) whose total value is 100 cents or less.
- N. The student will investigate the passage of time and tell time to the hour and half-hour, using analog and digital clocks; and read and interpret a calendar.
- O. The student will use nonstandard units to measure and compare length, weight, and volume.
- P. The student will identify, trace, describe, and sort plane figures (triangles, squares, rectangles, and circles) according to number of sides, vertices, and angles; and identify and describe representations of circles, squares, rectangles, and triangles in different environments, regardless of orientation, and explain reasoning.
- Q. The student will collect, organize, and represent various forms of data using tables, picture graphs, and object graphs; and read and interpret data displayed in tables, picture graphs, and object graphs, using the vocabulary more, less, fewer, greater than, less than, and equal to.
- R. The student will sort and classify concrete objects according to one or two attributes.
- S. The student will identify, describe, extend, create, and transfer growing and repeating patterns.
- T. The student will demonstrate an understanding of equality through the use of the equal symbol.
- A. The student will orally count forward to 110 and backwards 1 and 30 by ones.
- B. The student will orally count forward by ones, twos, fives, and tens to determine the total number of objects to 110.
- C. The student will write the numerals 0 to 110 in sequence and out-of-sequence.
- D. The student, given up to 110 objects, will group a collection into tens and ones and write the corresponding numeral.
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- F. The student will order three or fewer sets from least to greatest and greatest to least.
- G. The student, given an ordered set of ten objects and/or pictures, will indicate the ordinal position of each object, first through tenth.
- H. The student will represent and solve practical problems involving equal sharing with two or four sharers.
- I. The student will represent and name fractions for halves and fourths, using models.
- J. The student, given a familiar problem situation involving magnitude, will select a reasonable order of magnitude from three given quantities: a one-digit numeral, a two-digit numeral, and a three-digit numeral (e.g., 5, 50, 500); and explain the reasonableness of the choice.
- K. The student will create and solve single-step story and picture problems using addition and subtraction within 20.
- L. The student will recognize and describe with fluency part-whole relationships for numbers up to 10; and demonstrate fluency with addition and subtraction within 10.
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- Q. The student will collect, organize, and represent various forms of data using tables, picture graphs, and object graphs; and read and interpret data displayed in tables, picture graphs, and object graphs, using the vocabulary more, less, fewer, greater than, less than, and equal to.

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Course Resources

See Ember's [Systems Requirements](#) for computer specifications necessary to operate this curriculum.

- Note: Embedded YouTube videos may be utilized to supplement Ember's YouTube videos are the property of the respective content creator, licensed to YouTube for distribution and user access. As a non-profit educational institution, Ember is able to use YouTube video content under the YouTube Terms of Service. For additional information on copyright, please contact the [Jerry Falwell Library](#)

* Course Policies

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."

- **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"*

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Materials Selection Policy

Ember curates educational materials that are consistent with the school's philosophy; however, the fallen human condition depicted in literature (as in Scripture itself) is not always pleasant. Valuable works sometimes have objectionable or profane elements. Good books provide four (4) recognized values.

- They build godly attitudes and character traits.
- They deepen our social and cultural awareness.
- They strengthen our use of written language.
- They provide a lifelong source of enjoyment and relaxation.

In order to instill these values in students and fulfill the stated objectives of the school, all Ember students are expected to read and study good books on a regular basis. Recognizing that materials designed for one level may not be appropriate for another, three (3) levels of criteria are applied:

- Elementary materials must contain no objectionable material,

- Objectionable elements in sixth through eighth-grade materials must be limited and must serve a specific educational purpose, and
- Objectionable content may be included in high school materials but must be outweighed by positive literary, curricular, and/or Christian values.

The curriculum department has approved required educational materials for students.

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. Students may freely resubmit for their first two attempts without the need for teacher approval.

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. With Ember, the teacher may be a physical school teacher or the student's parent/guardian. The teacher can give another attempt from his or her Canvas account. For more information on how to do this, please review the Ember orientation course.

Schedule

Module 1: Number Sense

- Week 1: Counting
- Week 2: Counting Continued
- Week 3: Tally Marks and Ten Frames
- Week 4: Teen Numbers

Module 2: Place Value

- Week 5: Tens and Ones
- Week 6: Expanded Form
- Week 7: Comparing Numbers
- Week 8: Ordering Numbers
- Week 9: Quarter One Review

Module 3: Estimation & Rounding

- Week 10: Estimation
- Week 11: Rounding

Module 4: Shapes & Patterns

- Week 12: Shape Investigations
- Week 13: Shapes
- Week 14: Sorting
- Week 15: Repeating and Growing Patterns

Module 5: Fractions

- Week 16: Fractions
- Week 17: Fractions Continued
- Week 18: Quarter Two Review

Module 6: Addition and Subtraction Strategies

- Week 19 Drawing Pictures and Number Lines
- Week 20: Counting On
- Week 21: Ways to Make Ten and Number Bonds

- Week 22: Doubles
- Week 23: Fact Families
- Week 24: Equality and Balanced Equations

Module 7: Word Problems & Graphing

- Week 25: Word Problems
- Week 26: Graphing
- Week 27: Quarter Three Review

Module 8: Money

- Week 28: Money
- Week 29: Counting Coins
- Week 30: Money Combinations and Word Problems

Module 9: Time

- Week 31: Types of Clocks and Telling Time to the Hour
- Week 32: Telling Time to the Hour and Half-Hour
- Week 33: Calendar

Module 10: Measurement

- Week 34: Length and Weight
- Week 35: Capacity and Volume
- Week 36: Quarter Four Review