

01. Establishing Routines

Content Area: **Math**
Course(s):
Time Period: **Full Year**
Length: **4 weeks**
Status: **Published**

General Overview, Course Description or Course Philosophy

In this unit, students will focus on the following skills and concepts:

- building a collaborative environment to learn both mathematics content and mathematical practices
- establishing Calendar Math routines
- number lines
- number grids
- quick looks routine
- combinations of 10
- odd/even patterns

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

Enduring Understandings:

- There are many ways to represent a number.
- Number sense develops through experience.
- Operations create relationships between numbers.
- The relationships among the operations and their properties promote computational fluency.
- Patterns provide insights into potential relationships.
- There can be different strategies to solve a problem, but some are more effective and efficient than others are.

Essential Questions:

- How do I determine the best numerical representation (pictorial, symbolic, objects) for a given situation?
- How does finding the common characteristics among similar problems help me to be a more efficient problem solver?
- How do mathematical operations relate to each other?
- How do I know which computational method and resources to use?
- How do I describe a pattern?
- How can patterns be used to make predictions?
- How do I decide what strategy will work best in a given problem situation?
- What do I do when I get stuck?

CONTENT AREA STANDARDS

MA.2.MD.B.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2,..., and represent whole-number sums and differences within 100 on a number line diagram.
MA.2.OA.B.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
MA.2.OA.C.3	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
MA.2.NBT.A.2	Count within 1000; skip-count by 5s, 10s, and 100s.
MA.2.NBT.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.7	Look for and make use of structure.

RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

Read Aloud- Lessons 1-3 & 1-9

Written Explanation and Revisions- Lesson 1-5

LA.W.2.5	With guidance and support from adults and peers, focus on a topic and strengthen writing as needed through self-reflection, revising and editing.
LA.W.2.8	Recall information from experiences or gather information from provided sources to answer a question.
LA.SL.2.1	Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
LA.SL.2.2	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
TECH.9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

STUDENT LEARNING TARGETS

- I can create a number line with:
 - Evenly spaced points
 - Corresponding whole numbers starting from 0
- I can use a number line diagram to model whole number sums and differences within 100
- I can describe the process followed to find solutions to addition and subtraction problems using a number line diagram
- I can add fluently within 20 showing: accuracy (correct answer), efficiency, and flexibility.

- I can subtract fluently within 20 showing: accuracy (correct answer), efficiency, and flexibility.
- I can count on or count back from any number within 1000
- I can look for and make use of structure
- I can read and write numbers up to 1000
- I can illustrate whether the number of a group of objects is even or odd
- I can explain how to determine whether the number of a group of objects is even or odd

Declarative Knowledge

Students will understand that:

- whole numbers on a number line represent lengths from 0 with equally spaced points corresponding to the numbers 0, 1, 2, ...,
- accuracy, efficiency, and flexibility are essential when adding and subtracting within 20
- structure and patterns can be used to read and write numbers up to 1000
- tools, such as number grids and number lines, can be valuable to complete addition and subtraction tasks
- determining whether a number is odd or even is based on pairing objects or counting them by 2s

Procedural Knowledge

Students will be able to:

- add and subtract within 20 mentally and fluently
- count within 1000
- read numbers to 1000
- write numbers to 1000
- Represent whole numbers as lengths from 0 on a number line diagram.
- Represent whole-number sums and differences within 100 on a number line diagram.
- Determine whether a group of objects (up to 20) has an odd or even number of members.

EVIDENCE OF LEARNING

Refer to the 'Formative, Summative, and Benchmark Assessments' sections.

Formative Assessments

- Journal Pages

- Self-Assessments/Student Friendly Scales
- White board responses
- Exit/Entrance Tickets
- Math Talks
- 2.MD.B6 Illustrative Math Task- <https://tasks.illustrativemathematics.org/content-standards/2/MD/B/6/tasks/1081>

Summative Assessments

- BOY Benchmark Assessment/SGO Assessment
- End of Unit Assessment
- Fact Fluency Assessments
- End of Unit Self Assessment

Benchmark Assessments

- EDM BOY Assessment
- IXL Screener / Diagnostic Snapshot BOY
- IXL Diagnostic Snapshot MOY
- IXL Diagnostic Snapshot EOY

RESOURCES (Instructional, Supplemental, Intervention Materials)

Calendar Math

Lessons:

- Build a Math Community Lesson 1 ([link](#))
- 1-1
- 1-2
- 1-4
- 1-5
- 1-6
- [\(Independent\) Problem Solving 1a](#)
- 1-7
- 1-9
- 1-10
- 1-11
- [\(Independent\) Problem Solving 1b](#)

Additional Content-related Tasks:

Task 1: [Price It](#)

Task 2: [Missing Numbers](#)

[Back to School Color-by-addition \(within 20\)](#)

INTERDISCIPLINARY CONNECTIONS

ELA:

Read Alouds-

Lots of Ladybugs! Counting by Fives by Michael Dahl

Even Steven and Odd Todd by Kathryn Cristald

- Career Readiness: Utilize Critical Thinking to Make Sense of Problems and Persevere in Solving Them
- Technology/Multimedia: Educational Tech Application
- Science & Health: Social Emotional Learning
- Social Studies: Current Events

LA.SL.2.1	Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
LA.SL.2.2	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

- simplify written directions
- visuals
- manipulatives
- graphic organizers
- sentence starters
- wait time
- additional time for tasks
- verbal responses
- illustrations

See link to Accommodations & Modifications document in course folder.